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ABSTRACT

This combination workbook and study guide for driver education courses is divided into three sections. Section One consists of eight parts including suggestions on avoiding various collisions and other driving maneuvers. The second section consists of an outline for assisting the student in taking notes on instruction. The third section is a manual for defensive drivers consisting of important driving tips and other information. Numerous illustrations, questions and answers, and other materials are included to enhance the use of the publication. A final examination and a glossary of terms are appended. (GB)

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(71)

DDC
DEFENSIVE DRIVING COURSE®

STUDENT WORKBOOK AND DEFENSIVE DRIVER'S MANUAL

THE DEFENSIVE DRIVING LEAGUE
DDC
DEFENSIVE DRIVING COURSE

DRIVER SAFETY
DRIVER CITIZENSHIP
DRIVER COURTESY

VT013486

NAME OF STUDENT

6 tion National Safety Council Driver Improvement Program

INTRODUCTION

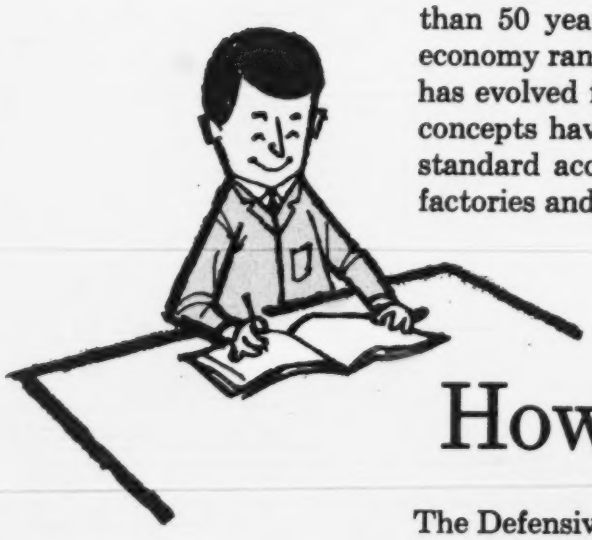
The National Safety Council's Defensive Driving Course has been designed to help you become a better and safer driver.

Safe driving requires the adoption of an attitude toward operating a motor vehicle known as "defensive driving." The defensive driver is not timid or overcautious, but he *is* determined to take every reasonable precaution to prevent traffic mishaps, *over and above* what the law requires him to do.

In this course, you will have the opportunity to learn what is involved in driving defensively, why and how various types of motor vehicle accidents occur, and what it takes to prevent them. You will be provided with a standard of driving excellence that you can use to evaluate and improve your own driving.

After you have satisfactorily completed the course, you will be eligible to join the National Defensive Driving League. An application form for this purpose is included in the Workbook.

Your instructor has been trained and approved by the National Safety Council. The material he uses has been developed by the Council on the basis of more than 50 years' experience in accident prevention in areas of our industrial economy ranging from coal mining to truck driving. While most of the material has evolved from experience in the motor transportation industry, additional concepts have come from various areas of industrial safety; for example, the standard accident prevention formula was developed by safety engineers in factories and plants.



How to Use the Workbook

The Defensive Driving Course is built around a number of key concepts. These have been italicized where they appear in the Workbook to make them easily recognizable. Once you understand the key concepts and apply them to the way you drive, you'll begin to see traffic situations in a new light and respond to them in a way that will avert an accident.

You will note that the Workbook is divided into three sections. The first section, which contains Sessions One through Eight, parallels and elaborates on the material you will be taught in class. It is necessary to read and understand the information in this section. The second section consists of an outline to enable you to easily take notes on the most important points covered by the instructor. For this reason, you must bring your Workbook to each class meeting. The third section, the Defensive Driver's Manual, consists of important driving tips and other information that should be studied carefully.

Once you have completed the course, keep your Workbook in a handy place so you can refer to it from time to time, thus keeping the principles of Defensive Driving fresh in your mind.

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Defensive Driving / A Preview

In this course, we've got only eight sessions in which to raise questions concerning safe driving techniques and to provide answers. We believe that safe driving is a continuous learning process, and we hope that you will find this course to be an unsettling experience—one that will cause you to re-examine your driving behavior and your preconceptions about how to handle driving emergencies you may never have actually experienced.

SESSION ONE / "Preventable or Not?"

Does the United States really have the world's worst traffic accident record? Is there such a thing as a perfect trip? What is a preventable accident? Who prevents it? What goes on in traffic court? Are you putting your license on the line every time you get behind the wheel, just because there's some traffic law of which you're not aware?

SESSION TWO / How to Avoid a Collision with the Vehicle Ahead

What does it mean to drive defensively? How does it differ from the way you're driving now? How can a formula keep you out of an accident? What are the six ways you can become involved in a collision with another car? How can you stay clear of rear-end collisions? How much distance do you need to come to a stop from 60 mph?

SESSION THREE / How to Avoid a Collision with the Vehicle Behind

How do you cope with a tailgater? If he rams into your vehicle, is he completely at fault? What do you look for and where do you look for it? What are the five elements of defensive driving?"

SESSION FOUR / How to Avoid a Collision with an Oncoming Vehicle

Why are headon crashes the deadliest? What are some of the signs that an oncoming car may cross the center line into your path? What do you do when the other car comes straight at you on a straight road? On a curve? How can you become involved in an accident while making a left turn? How do you recover safely when your right-wheel drops off the pavement?

SESSION FIVE / How to Avoid an Intersection Collision

What four steps can keep you out of intersection collisions? Who has the right of way at an intersection that has no traffic control signals? When you approach an intersection, which way do you look first—to the left or to the right? What percentage of accidents happen at intersections?

SESSION SIX / The Art of Passing and Being Passed

How can you get involved in an accident when passing? When being passed? How can you help another driver pass? How long does it take to pass another vehicle at 60 mph? If another vehicle is approaching at 60 mph, how much distance do you need in order to complete the passing maneuver safely?

SESSION SEVEN / "The Mystery Crash"

What is a "mystery crash?" What causes it? How can you avoid it? How can you best control your vehicle on a curve? What do you do when a tire blows? Why is it dangerous to drive with all the car windows closed? Can you drink and still drive safely?

SESSION EIGHT / How to Avoid Other Common Types of Collisions

How many vehicle-pedestrian accidents involve drunken pedestrians? What causes you to collide with a fixed object? How far from a railroad crossing should you stop? How can you avoid a collision with a cyclist? Why is backing said to be a "dangerous" maneuver?

SESSION ONE / Preventable or Not?

Traffic Accidents Are Everyone's Concern

The traffic problem in the United States is not, as is commonly supposed, the worst in the world. In fact, our per-mile accident rate is considerably lower than that of most civilized countries, mostly as the result of intensive safety campaigns and better driver education, law enforcement, roads and vehicles.

But the traffic accident problem is still much too serious to ignore, especially when you consider that—

- Every 10 minutes someone dies in an automobile accident—six die every hour, 150 every day.
- In one year, about 55,000 people—the population of a medium-sized city—are killed in traffic accidents.
- One out of every two people living today will be involved in a crippling or fatal traffic accident.

A lot of individuals and organizations care what happens to these drivers, including the President of the United States, the governor of your state, the mayor of your community, your police department, traffic courts, traffic engineers, your schools and your national and local safety councils.

YOU AND THE NATIONAL HIGHWAY SAFETY ACT OF 1966

Since the first American died in an auto accident in 1899, the nation's efforts to control traffic accidents have been on a state by state basis.

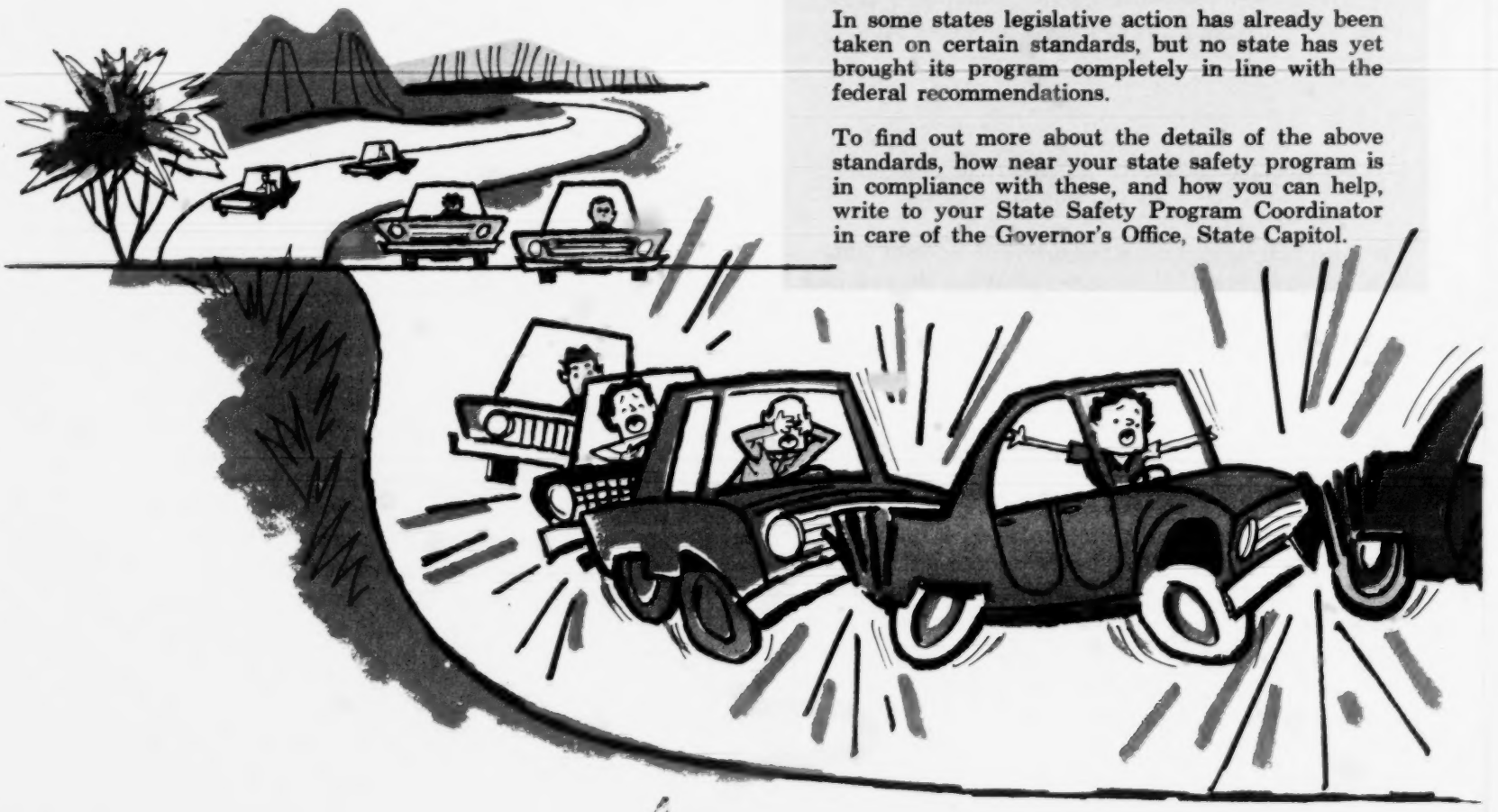
The National Highway Safety Act of 1966 grew out of a realization that only by a common approach by all levels of government, Federal, state, and local, could these control objectives be reached. The Act establishes standards for state safety programs developed jointly by federal and state officials and agencies. There are 16 standards as follows:

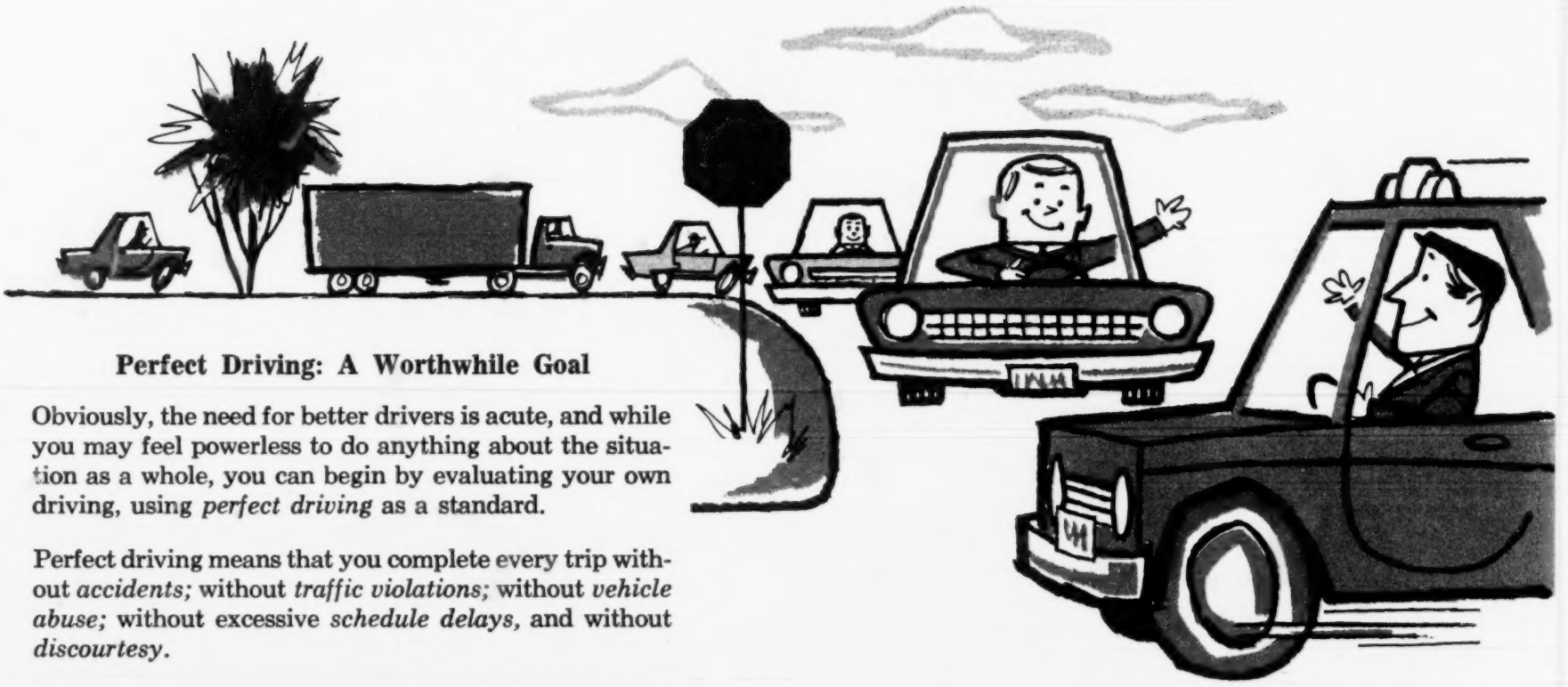
4.4.1 Periodic Motor Vehicle Inspection
4.4.2 Motor Vehicle Registration
4.4.3 Motorcycle Safety
4.4.4 Driver Education
4.4.5 Driver Licensing
4.4.6 Codes and Laws
4.4.7 Traffic Courts
4.4.8 Alcohol in Relation to Safety
4.4.9 Identification of Accident Locations
4.4.10 Traffic Records
4.4.11 Emergency Medical Service
4.4.12 Highway Design, Construction and Maint.
4.4.13 Traffic Control Devices
4.4.14 Pedestrian Safety
4.4.15 Police Traffic Services
4.4.16 Debris Hazard Control and Cleanup

Although the standards set forth what each state safety program should have, they allow each state to decide how it wishes to upgrade its efforts.

In some states legislative action has already been taken on certain standards, but no state has yet brought its program completely in line with the federal recommendations.

To find out more about the details of the above standards, how near your state safety program is in compliance with these, and how you can help, write to your State Safety Program Coordinator in care of the Governor's Office, State Capitol.





Perfect Driving: A Worthwhile Goal

Obviously, the need for better drivers is acute, and while you may feel powerless to do anything about the situation as a whole, you can begin by evaluating your own driving, using *perfect driving* as a standard.

Perfect driving means that you complete every trip without *accidents;* without *traffic violations;* without *vehicle abuse;* without excessive *schedule delays,* and without *discourtesy*.

This course gives you a definition of perfect driving. Just for fun, use it as a yardstick to compare your own driving with that of the "average driver." Use a scale of one to ten to rate yourself and the "average driver" on each item.

Ability to:	Your Driving	"Average Driver"
Avoid Accidents	_____	_____
Avoid Traffic Violations	_____	_____
Avoid Vehicle Abuse	_____	_____
Avoid Schedule Delays	_____	_____
Avoid Acts of Discourtesy to Others	_____	_____
Total Score	_____	_____

Preventability—Possible and Reasonable

Perfect driving involves the ability to operate a motor vehicle in such a manner as to avoid being involved in a *preventable accident*. Most accidents are preventable by one or both of the drivers involved, even though this sometimes involves letting the driver in the wrong have the right-of-way.

The idea that most accidents are preventable makes it important to distinguish between the *possible* and *reasonable precautions* a motorist can take to avoid being involved in a traffic mishap. The most obvious possible precaution would be not to drive at all, but that's not a reasonable solution.

This course is designed to make you aware of the various reasonable precautions that relate to driving and to teach you how to apply them.

Rules of the Road

At the end of this session you will receive a copy of your state motor vehicle rule book. Read it carefully in preparation for a quiz on the material at the end of Session Six.

DEFENSIVE DRIVING WORKSHOP

Discuss ways by which local officials, guided by the National Highway Safety Act of 1966, can make the streets and highways of your community safer.

SESSION TWO/ The Practice of Defensive Driving

Defensive Driving: The Art of Staying Alive

Defensive driving is a key concept in the Driver Improvement Program. It represents an approach to the driving task that, when applied, can lessen your chances of being involved in a motor vehicle accident. Defensive driving means driving so as to prevent accidents in spite of the actions of others or the presence of adverse driving conditions.

As a defensive driver, you'll learn to "give" a little—to tailor your driving behavior to the unexpected actions of other drivers and pedestrians, to the unpredictable and ever-changing factors of light, weather, road and traffic conditions, to the mechanical condition of your vehicle, and even to how you feel.

The Standard Accident Prevention Formula

In order to do this, you'll need to know and apply the *standard accident prevention formula,* which involves three interrelated steps:

1. **See the Hazard:** Think about what is going to happen or what might happen as far ahead of encountering the situation as possible. Never assume everything will be "all right."

2. **Understand the Defense:** There are specific ways of handling specific situations. Learn them and learn them well so you can apply them when the need arises.

3. **Act in Time:** Once you've seen the hazard and you understand the defense against it, act! Never take a "wait-and-see" attitude.

Taking Stock of Your Defenses

Seeing the hazard starts far in advance of the scene of a would-be accident—it starts before you even get behind the wheel, with a *pre-trip mental inventory of driving conditions.*

Here is a list of six adverse driving conditions. On the basis of what you have learned in class, give at least one defense for each potential accident-producing condition.

1. **Dense fog** (Weather)

Defense:_____

_____

2. **Glare from brilliant sunshine** (Light)

Defense:_____

_____

3. **Slow-moving, bumper-to-bumper rush-hour traffic** (Traffic)

Defense:_____

_____

4. **Winding, two-lane mountain road** (Road)

Defense:_____

_____

5. **Heavily frosted windshield** (Vehicle)

Defense:_____

_____

6. **A feeling of drowsiness and blurred vision** (Driver)

Defense:_____

_____

If you were able to supply effective defenses against these six hypothetical adverse driving conditions, you've already *seen* the hazards and *understood* the defenses; remember them, and you'll be prepared to *act* in time.

Almost without exception, accidents result from *driver error.* The same error can cause a minor accident or a fatality—chance alone determines the severity. This means that every minor mishap, every "close shave" is well worth reviewing in terms of what went wrong—who was in error, and why—so that steps can be taken to avert a more serious, possibly fatal, recurrence. Even if you emerge from this analysis legally blameless, the fact that your own driving behavior allowed the accident to occur indicates that your defenses failed.

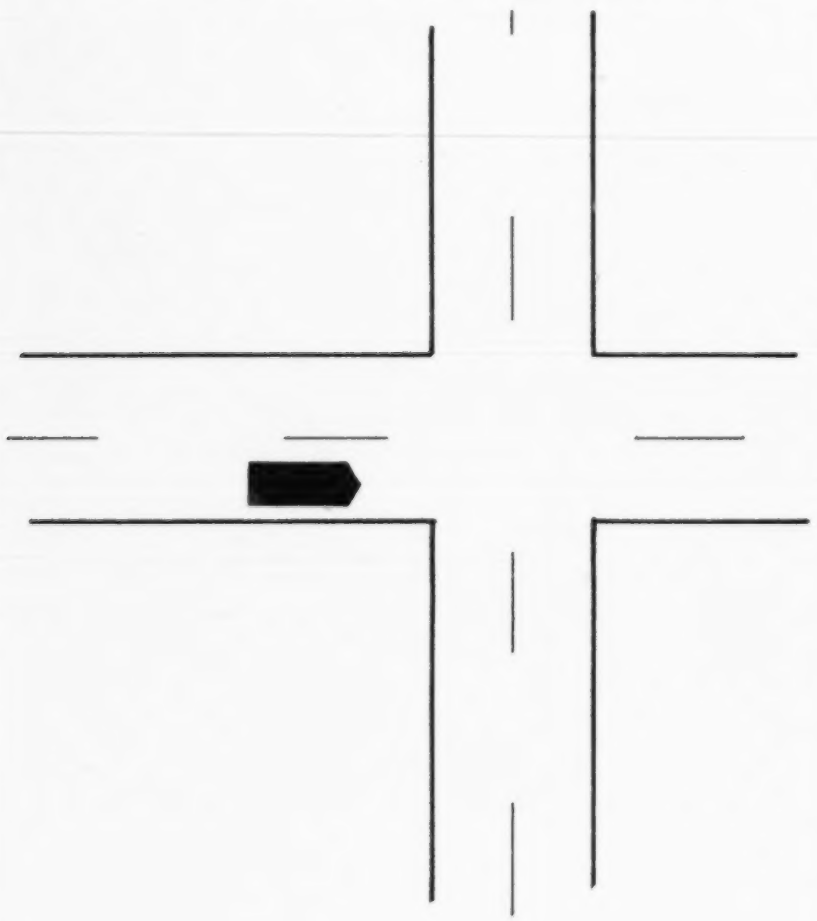
The Deadly Two-Car Crash

People are injured and killed in traffic accidents in a number of ways, ranging from headon collisions to running off the road. However, the single most significant cause of fatalities, serious injuries and property damage is the *two-car crash.*

There are six positions which your car can take in relation to another in order to produce a two-car crash. In any traffic situation you have the possibility of a collision with the car ahead, the car following, the car approaching, the car intersecting, the car passing and the car you overtake and pass.

In the diagram below, draw in the position of another vehicle in relation to your own to illustrate situations producing—

1. a collision with the vehicle ahead
2. a collision with the vehicle following
3. a headon collision
4. an intersection collision
5. a collision with a vehicle passing
6. a collision with a vehicle you attempt to pass



Stay Back and Stay Safe

An extremely frequent and costly accident, in terms of liability suits, is the *collision with the vehicle ahead.*

There are four simple steps that will help you avoid being involved in a collision with the car ahead:

1. **Stay alert:** Watch for signs from the driver ahead as to what he intends to do. Is his turn signal on? Are his brake lights lit? Has he been gradually drifting to the right or the left as if to prepare for a turn?

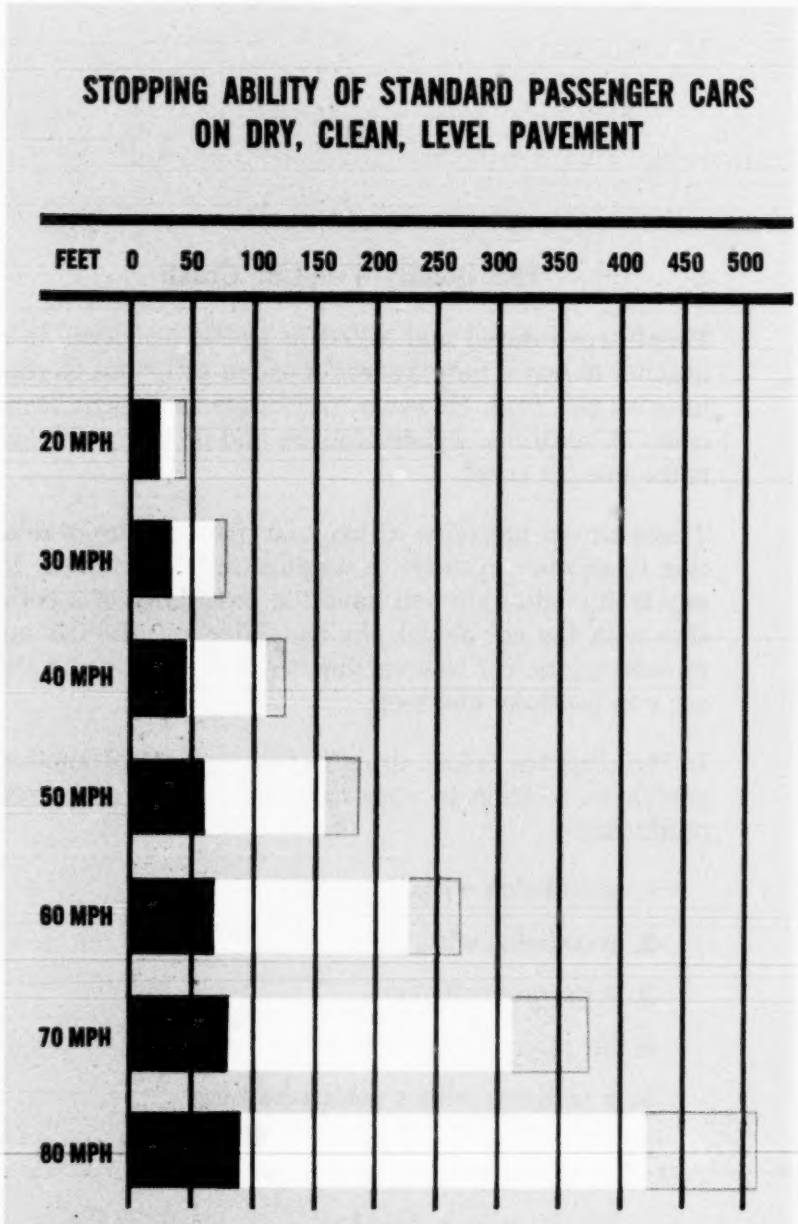
2. **Stay ahead of the situation:** Look beyond the driver ahead to see situations that may force him to act quickly and thereby become a threat to you. Are there vehicles in the roadway or on the shoulder? Are there marked or unmarked intersections? Are there parked cars, pedestrians or livestock present?

3. **Stay back:** Allow one car length—using your own car's length as a measure—for every ten miles of speed—more in adverse weather or road conditions. Use the Two Second Rule to make sure that you have the correct following distance. If you stay two seconds behind the car in front, you will have the correct distance no matter what your speed. It works like this: Watch the vehicle ahead pass some definite point on the highway, such as a tar strip. Then, count to yourself "one thousand and one, one thousand and two." That's two seconds. If you reach that same spot before you finish those words, you are following too closely.

4. **Start stopping sooner:** Apply your brakes the instant you see a hazard developing, but apply them gradually so you don't throw your car into a spin or grind to a stop so quickly that you risk a rear-end collision with the car following you.

The time it takes you to stop depends upon your speed, the condition of the road, the condition of your car and how alert you have been. It can be expressed as a formula:

Reaction Distance + Braking Distance = Total Stopping Distance


STOPPING ABILITY OF STANDARD PASSENGER CARS
ON DRY, CLEAN, LEVEL PAVEMENT
FEET 0 50 100 150 200 250 300 350 400 450 500
20 MPH
30 MPH
40 MPH
50 MPH
60 MPH
70 MPH
80 MPH
Driver reaction distance is based on a reaction time of ¾ second, which is generally considered average for the typical driver under normal driving conditions.
The braking ability of passenger cars can vary widely due to the type and condition of the pavement surface, the type of tires, the condition of the tires and brakes, and other factors. The values in the table above show a braking distance range from the 15 percentile to the 85 percentile level and are based on tests conducted by the U. S. Bureau of Public Roads at 20 mph on dry, level pavement. Since extensive test data are not available in the upper speed ranges, distances for higher speeds were computed by the use of expansion factors based on limited test data.
15%
85%
The 15 percentile value is the braking distance in which only 15 per cent of the vehicles tested were capable of stopping. The 85 percentile value is the braking distance in which 85 per cent of the vehicles were capable of stopping. Far longer braking distances than those shown above would, of course, be encountered when the pavement is wet, snowy or icy.
Stopping distance as used here includes driver reaction distance and braking distance.
REMEMBER:
—If you are not as alert as you should be
—If your brakes or tires are not good
—If the road surface is wet, icy or rough
These stopping distances could be more than doubled.

DEFENSIVE DRIVING WORKSHOP

Discuss the ways in which auto accidents affect insurance rates. Students may wish to relate personal experiences in this area.

BE YOUR OWN TRAFFIC JUDGE

"It was raining hard, and I was following a bus and two cars. We were approaching a town. The bus stopped without pulling off the pavement. The two other cars in front stopped, too. I applied my brakes but began to skid. I tried to pull to the left but the front wheels skidded and I ran into the rear of the car ahead."

	TRUE	FALSE
1. The accident is non-preventable because weather conditions made it impossible to stop.	____	____
2. The accident was non-preventable because the car in front of you was closer to the situation and should have signaled that he was going to stop.	____	____
3. The accident was preventable because your vehicle should have been equipped with chains.	____	____
4. The accident was non-preventable because it was caused by the bus stopping on the pavement.	____	____
5. The accident was preventable because such collisions are preventable.	____	____

Answers:

1. False. While the driving rain reduced visibility and made the pavement slippery, it cannot be blamed for the accident. You failed to adjust to these conditions by not slowing down and maintaining more following distance.

2. False. You cannot base your driving on the premise that the driver in front of you is always going to give you clear and timely warning of what he is going to do. You must be responsible for being able to stop if the vehicle ahead stops suddenly.

3. False. Even with chains, you must maintain a safe following distance and be able to stop in time.

4. False. While the behavior of the bus contributed to the accident, alert driving on your part would have prevented it.

5. True. Running into the rear of another vehicle is seldom excusable. Your defense against this type of accident is to maintain safe speed and following distance.

SESSION THREE / How to Avoid a Collision with the Vehicle Behind

How to Deal with Tailgaters

It is sheer foolishness to say that "any driver who hits my vehicle from behind is in the wrong." An attitude like that can literally break your neck.

You have a responsibility to the driver following you. You have to let him know what you are going to do in order for him to know what to do.

There are three measures you can take to avoid being hit from behind:

1. **Signal your intentions:** Use your directional signals, brake lights and arm signals.
2. **Stop smoothly:** Once in a while, you have no choice but to jam on the brakes. Most of the time this shouldn't be necessary, since if you follow the rules for avoiding collisions with the vehicle ahead, you will at the same time prevent collisions with the vehicle following.
3. **Keep clear of tailgaters:** Don't let a tailgater rile you. Just slow down. This will eliminate the hazard by:
   1. Encouraging him to pass you.
   2. Increasing the following distance between your car and the car ahead so you won't have to brake suddenly and be hit by the tailgater.
   3. Forcing him to slow down, thereby making it easier for him to stop safely, when you stop.

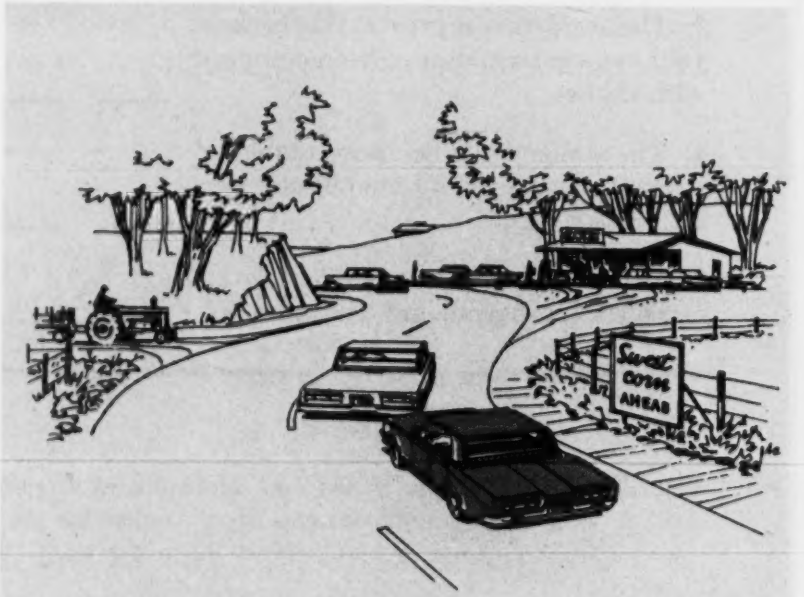
Test your knowledge of your rights and responsibilities to the driver following you by answering the questions in "Be Your Own Traffic Judge" on page 9. Some of the answers may surprise you!

Defensive Driving: A Matter of Attitude

If you practice defensive driving, it's unlikely that you'll find yourself involved in a collision with a vehicle following your own. After all, defensive driving is largely a matter of attitude—the determination on your part to do everything reasonably possible to avoid being involved in a preventable accident, regardless of what the law says, what the other driver does, or the adverse driving conditions you encounter.

There are a number of attitudes that characterize the defensive driver. How many do you display?

1. **Knowledge:** Do you know the traffic rules and regulations of your state? Are you aware of proper procedures for passing, yielding the right of way and other maneuvers you'll be called upon to perform when you're behind the wheel?

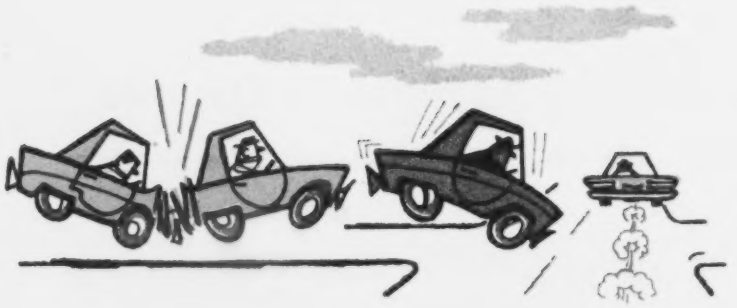


1._____

2._____

3._____

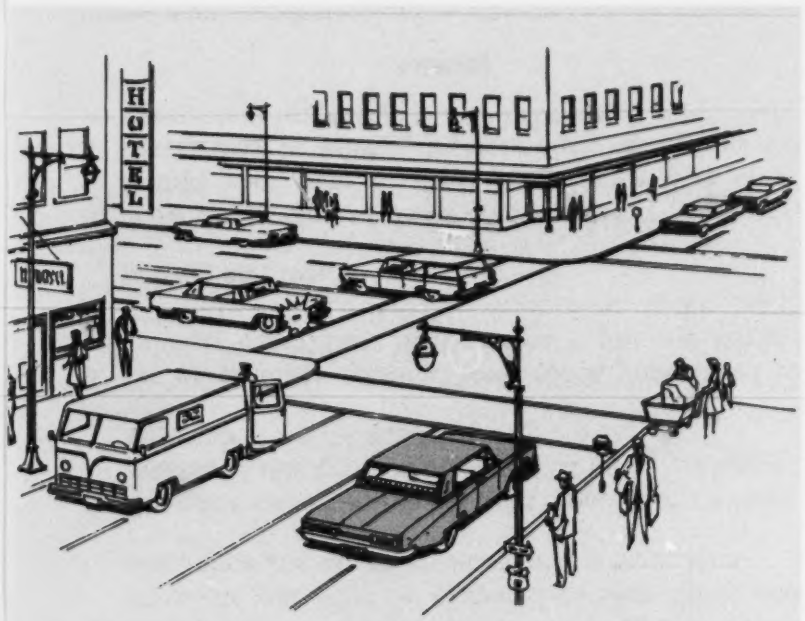
2. **Alertness:** Are you aware of what's going on around you? Test your alertness by listing at least three potential accident-producing factors in the picture above and the one opposite.



3. **Foresight:** Do you "look ahead" when you drive? Can you predict what is likely to happen? Foresight includes both short and long-range predictions, such as getting ready to stop when you see a traffic light ahead and making a pre-trip mental inventory of driving conditions. Re-examine the pictures below, and predict what is likely to occur in the traffic situations shown.

4. **Judgment:** Another word for good "horse sense." Judgment involves knowing what to do and *doing it* at the right time—every time. Using the pictures, tell what you, as the driver of the vehicle, would do to avoid being involved in an accident.

5. **Skill:** Do you know how to handle your car? How to start, stop, turn, go forward and in reverse and execute various emergency maneuvers? Research has shown that skill is not simply the result of practice, but the result of proper *training*, plus practice.



1. _____

2. _____

3. _____

BE YOUR OWN TRAFFIC JUDGE

"I was traveling along in a long line of cars and trucks. The flow of traffic was about 50 mph. The road was dry and the weather clear.

Suddenly, a car darted into the stream of traffic from a side road ahead. I was about 35 feet behind the car ahead, and I barely managed to stop when he stopped, but the driver behind rammed into me."

	TRUE	FALSE
1. This accident could have been prevented.	____	____
2. Technically, the driver who tried to dart into the traffic from the side road was at fault, so I couldn't have prevented this accident.	____	____
3. The driver behind me was at fault.	____	____
4. I could have prevented this accident.	____	____

Answers:

1. True. It could have been prevented by better driving by all three drivers involved—the one who tried to dart into traffic, the driver behind you, and you.

2. False. His name won't even appear in the accident report. In one sense, he is partially at fault, since he was trying to cut into the fast-moving flow of traffic. But it's your responsibility to watch out for exactly this sort of thing.

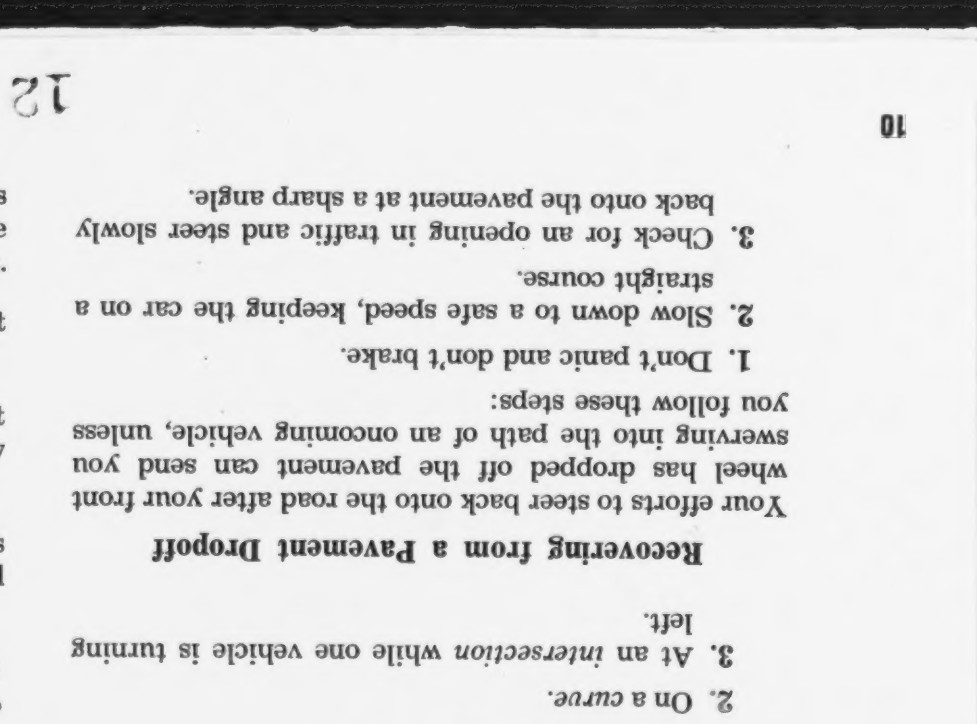
3. True. Legally, he is at fault, but that won't make your stiff (or broken) neck feel any better. As a defensive driver, you should have been as aware of the driver behind you as you were of the situation ahead.

4. True. It could have been prevented in a number of ways. First, you were traveling too close to the car ahead. At 50 miles an hour, assuming your car was 20 feet long, you should have been at least 100 feet behind. Following too closely forced you to stop suddenly. Second, you could have used an arm signal to caution the driver behind that something was happening ahead that might cause you to have to stop suddenly. Having seen the driver dart into traffic from the side road, your foresight should have told you that drivers ahead would have to stop.

DEFENSIVE DRIVING WORKSHOP

Scan your newspaper for articles on traffic accidents. Bring them to class and, on the basis of the information in the article, try to analyze the probable causes, and whether or not they were preventable.

SESSION FOUR/ How to Avoid a Collision with an Oncoming Vehicle



The deadliest of all collisions is one that occurs with an oncoming vehicle. A number of factors contribute to the fatalities that result from such accidents:

- In a headon collision, the cars involved stop almost immediately; unfortunately, their occupants usually keep on traveling—right into the windshield and dashboard.
- Since most headon collisions occur slightly off-center, one or both cars spin and their occupants are thrown out of the car. This is where safety belts save lives.

Why and How Headon Collisions Occur

A collision with an oncoming vehicle can occur in any one of three basic situations:

1. On a *straight road.*
2. On a *curve.*
3. At an *intersection* while one vehicle is turning left.

Recovering from a Pavement Dropoff

Your efforts to steer back onto the road after your front wheel has dropped off the pavement can send you swerving into the path of an oncoming vehicle, unless you follow these steps:

1. Don't panic and don't brake.
2. Slow down to a safe speed, keeping the car on a straight course.
3. Check for an opening in traffic and steer slowly back onto the pavement at a sharp angle.

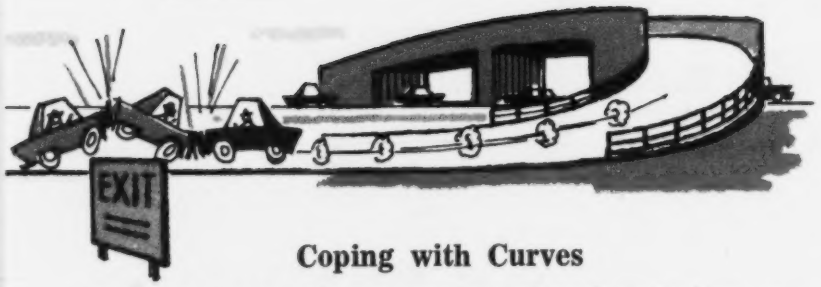
Avoiding a Headon Collision on a Straight Road

Here are some situations occurring on a *straight road* that could lead to headon collisions. Briefly state what your defense should be in each case. What would you do if . . .

1. You saw a long line of traffic coming from the opposite direction, following a truck?
2. An oncoming car was forced into your lane by another vehicle?
3. An oncoming car had to pass a cyclist in the roadway?
4. A car approaching you had its right wheels off the pavement?
5. A large oncoming truck was approaching an intersection, signaling a right-hand turn?
6. You were driving on a foggy night on a blacktop road with a poorly-marked center line?
7. A lone car, traveling in the opposite direction, began to drift into your lane?

Answers:

1. Slow down. Drive as far to the right in your lane as possible. Watch oncoming vehicles. It is very possible that someone in this long line will attempt to pass.
2. Slow down and go to the right as soon as you see that one driver is forcing the other into your lane.
3. The presence of a pedestrian, cyclist or fixed object in the other lane should be a warning to you to slow down and be prepared to move farther to the right.
4. Unless the other driver knows how to get out of this situation you must be prepared to slow down and stop, since his car may swerve across your lane.
5. Slow down and move to the right if necessary. A large vehicle of this type may have to cut into your lane to negotiate a right-hand turn.
6. Be particularly cautious and match your speed to existing conditions. Realize that if you are having difficulty telling where the center of the road is, other drivers are, too.
7. Slow down, stop or drive off the road if necessary. Sound your horn or flash your lights. The other driver may be asleep, drunk or sick; his actions are completely unpredictable. *Do not move to your left.*



Coping with Curves

The best way to take a curve is to slow down before you enter it. On right-hand curves, keep to the right edge of the pavement and on left-hand curves, keep in the middle of your lane. Apply power to the wheels when in the curve.

The relative danger of a headon collision in a *curve* depends on which direction the curve takes.

- **On right-hand curves.** Avoid allowing your car to drift into the other lane, since centrifugal force will tend to pull it to the left.
- **On left-hand curves.** Be alert to the other vehicle's tendency to drift into your lane, since centrifugal force tends to pull him to the left.

Yield the Right-of-Way

There is no reason why an accident with an oncoming vehicle need occur when you are making a left-hand turn across traffic. Most of these accidents occur because the driver attempting to make the turn tried to dispute the right-of-way with oncoming traffic, or took a chance and tried to beat oncoming traffic. The rule of the road is that *oncoming traffic always has the right-of-way,* so you must wait until traffic is clear before attempting to turn. Nevertheless, the driver continuing through the intersection should slow down when approaching a vehicle waiting to turn left in case the left-turning car suddenly pulls in front of him.

Accidents sometimes occur when a car waiting to make a left turn is hit from behind and forced into the path of oncoming traffic. This can be avoided by keeping your wheels turned straight ahead. Then, if someone hits you from behind, you won't head into oncoming traffic. (It's also important to remember the techniques for avoiding collisions with vehicles behind, by making use of directional signals and arm signals well before executing your turn.)

BE YOUR OWN TRAFFIC JUDGE

"I was traveling on a superhighway which had three lanes going in each direction separated by a median strip. I was in the center lane moving at 60 miles per hour overtaking a semi-trailer truck traveling at 50 miles per hour. The truck and I were approaching an exit ramp when, suddenly, a vehicle, traveling in the wrong direction, came down the ramp, darted in front of the truck and sideswiped me."

	TRUE	FALSE
1. The accident was preventable because you should not have allowed your view of the exit ramp to be obscured.	____	____
2. The accident was non-preventable because there was nothing you reasonsonably could have done to prevent the accident.	____	____
3. The accident was preventable because you should never pass another vehicle near an exit ramp.	____	____
4. The accident was preventable because you should have been driving in the lane nearest the median strip instead of in the center lane.	____	____

Answers

1. False. It is probably unreasonable to expect drivers to take special precautions against wrong-way drivers at exit lanes.
2. True. You were operating your vehicle in a reasonable manner, so from your standpoint, this was a non-preventable accident.
3. False. It often is necessary to pass other vehicles near exit lanes, since some of these vehicles will be slowing down, preparing to enter the deceleration lane.
4. False. Your being farther to the left may have helped the erring vehicle avoid hitting you, but you had a perfect right to be in the lane you were at the speed you were traveling. The accident may be regarded as non-preventable from your standpoint.

DEFENSIVE DRIVING WORKSHOP

Discuss the ways in which the students received their driver training prior to taking DDC. Poll the class to determine how many took high school driver's education, commercial driving school training, etc., and discuss the merits of each.

SESSION FIVE / How to Avoid an Intersection Collision

Wherever you go, others cross your path, and you're in danger whenever they do. One third of all traffic accidents happen at intersections and about 40 per cent of all urban traffic accidents occur there.

Whenever you approach an intersection, take the following steps to avoid driving mistakes—yours, and those of other drivers:

- **Know** your route and plan ahead.
- **Slow** for intersections and expect the unexpected.
- **Show** your intentions by position and signals.
- **Go** with care.

Know Your Route

Drivers sometimes do unexpected things at intersections —they may turn abruptly (often from the wrong lane), signal improperly (or not at all), or screech to a sudden stop. So be alert!

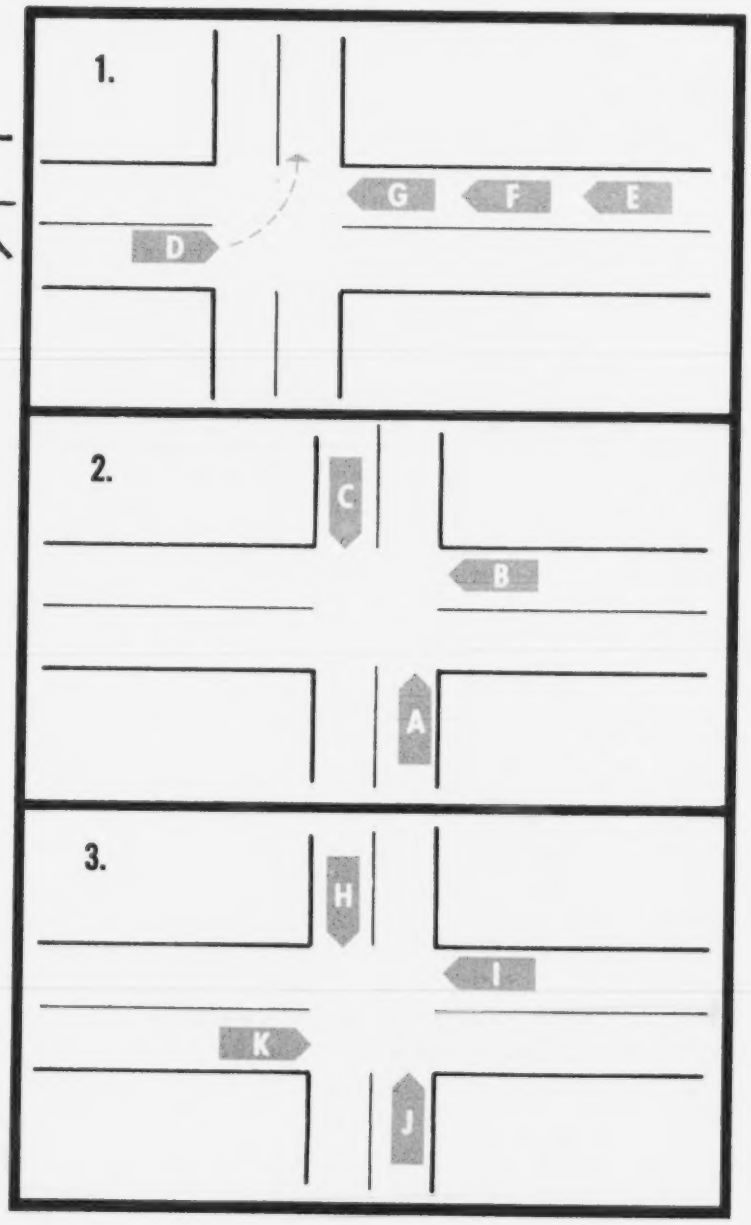
Know your turns in advance so you can get in position early and slow gradually. Watch for map landmarks, "next exit" signs, or house numbers. Remember that sudden, last-minute swerves can cause pile-ups!

Traffic signs and signals can regulate traffic, but they can't prevent accidents. Obey them, but be prepared to yield when other drivers do not. Be especially wary of control devices that permit you to move after you make a decision—flashing red and amber lights, stop signs and yield signs. Be sure your decision is the safe one.

When two vehicles enter an intersection from different highways at approximately the same time, the driver of the vehicle on the left shall yield the right-of-way to the vehicle on the right. But don't risk your neck on it. Some drivers forget, and nobody wins a tie.

Who's Got the Right of Way?

Indicate by letter (A, B, C, etc.) the order in which the vehicles in the diagrams below should proceed through the intersection.



They should go in the following order:

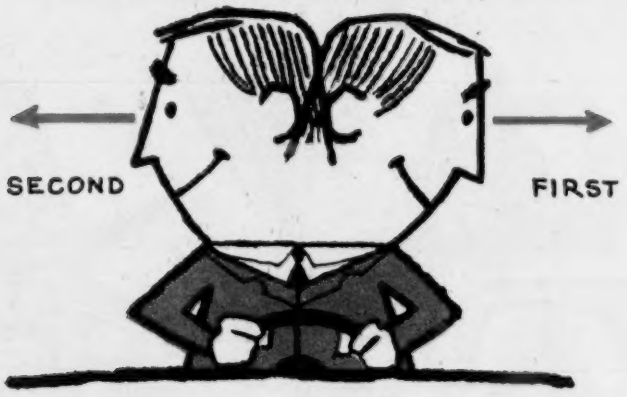
1. _____

2. _____

3. _____

Answers: 1. G, F, E, D; 2. C, B, A; 3. Normally, a driver yields to the vehicle on his right, but in this impasse, yielding involves some kind of agreement among the motorists involved. Through eye contact, gestures and deference, situations of this kind iron themselves out.

Slow for Intersections

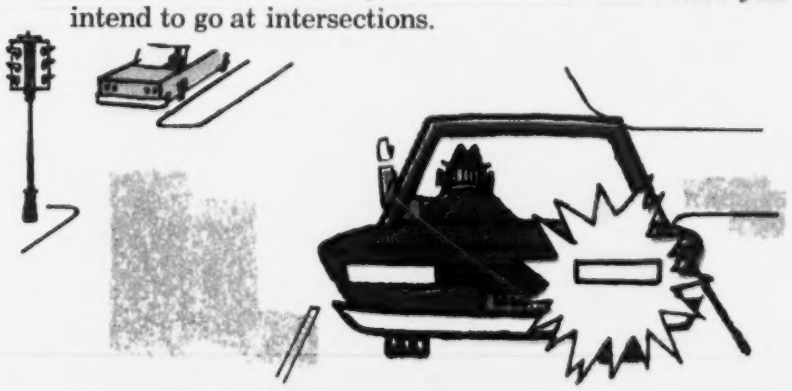


1. As you approach an intersection, have your foot off the accelerator and over the brake pedal to give yourself that extra split second of reaction time.

2. Look first to the left, then to the right, since traffic from the left is closer to you and crosses your path first.

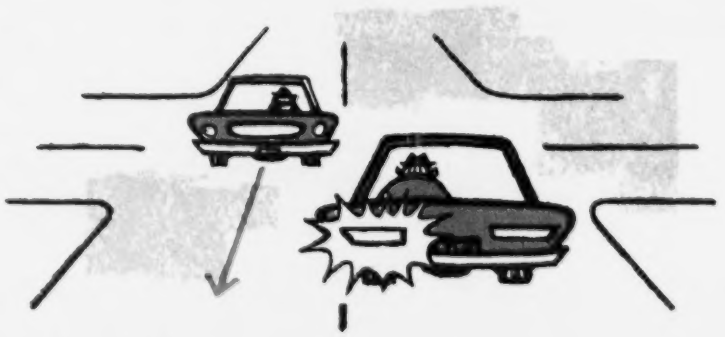
Show Your Intentions

Let others know what you intend to do and where you intend to go at intersections.



When you're going to turn, get into the proper lane early, and use your turn signals at least a half block ahead of the intersection.

When turning right, get close to the right curb to block anyone from trying to pass on the right. Watch out for small cars, bikes and scooters coming between you and the curb.



When turning left, don't try to beat oncoming traffic; it has the right of way. Also, yield to approaching vehicles turning right.

Keep wheels straight while waiting to make a left turn so that if someone rams you, you won't be knocked into the path of oncoming traffic.

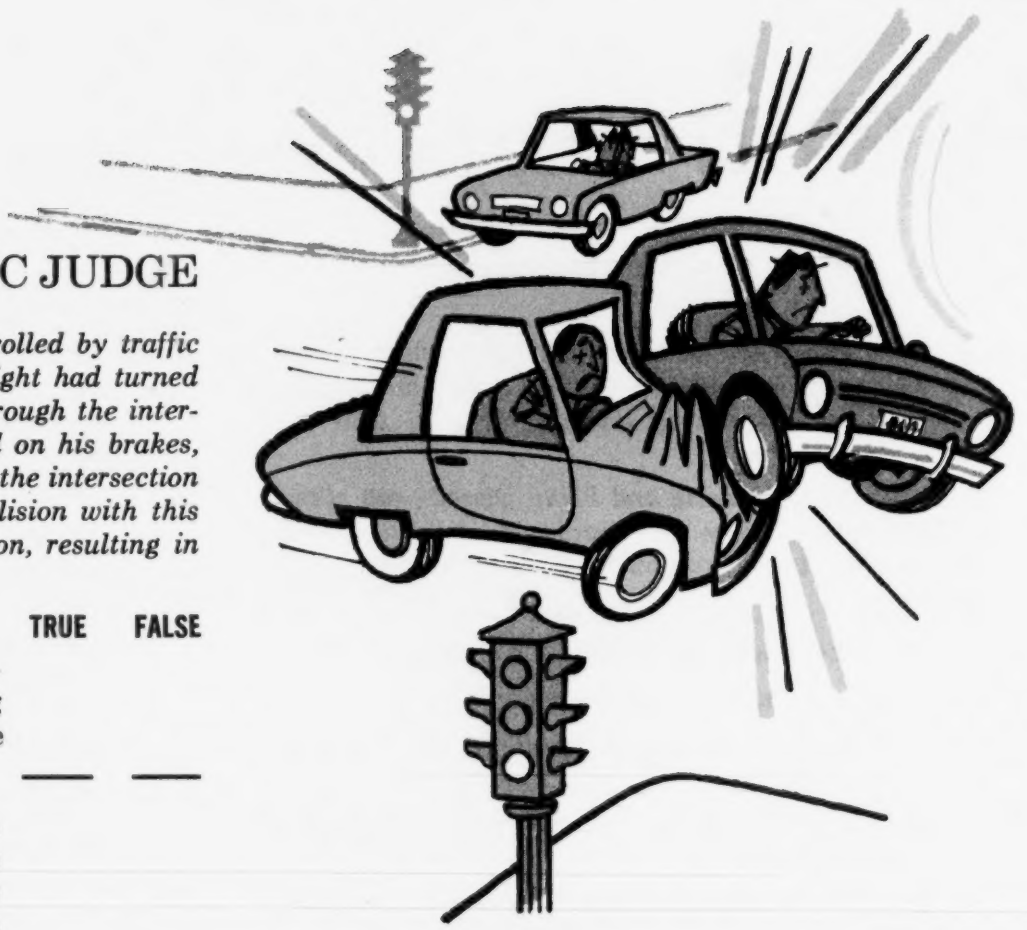
Check your mirrors to make sure the following driver is aware of your intention to turn left. He may try to pass on your left just as you start your turn.

Go with Care

When you're sure the way is clear, go! Hesitation and overcaution at intersections can cause accidents by confusing other drivers.

Take your time after the light turns green. Somebody in the cross traffic may try to beat the light. Don't tailgate another car through the intersection; something you can't see (perhaps a pedestrian) may force him to hit the brake and you to hit his car. Let him take off, then say "1-2-3-go" to yourself before you follow.

Proceed with caution through familiar intersections and usually empty residential streets. Remember, driveways, plant entrances and store parking lot exits make intersections out of what seem to be mid-block streets.



BE YOUR OWN TRAFFIC JUDGE

"I was stopped at an intersection controlled by traffic lights. I was in the left lane and the light had turned green. The vehicle alongside started through the intersection and I started, too. He slammed on his brakes, but I failed to see a car coming through the intersection from the right. I had a right-angle collision with this vehicle in the middle of the intersection, resulting in extensive damage."

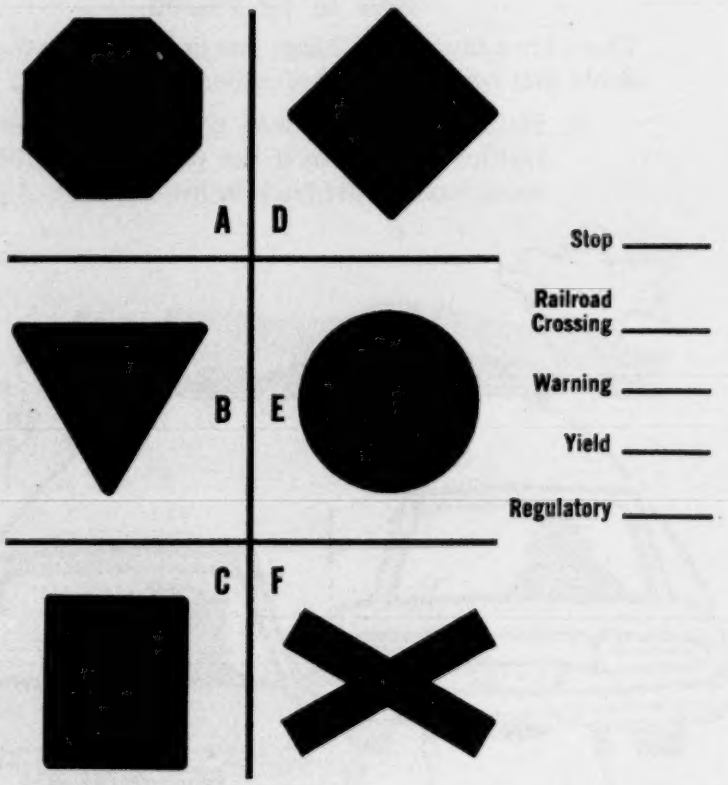
	TRUE	FALSE
1. The accident was non-preventable because the vehicle on the intersecting street was going through against the light.	___	___
2. The accident was non-preventable because the vehicle in the right lane was partially at fault because he was in a better position to see the vehicle coming from the right, and should not have made a move until it was across the intersection.	___	___
3. The accident was preventable because you should have checked to see if all traffic had cleared.	___	___
4. The accident was non-preventable because if you can't trust signal lights, there is no hope for any driver who really wants to have a good safety record.	___	___
5. The accident was preventable because the green light is no guarantee of the right of way.	___	___

Answers

1. False. Very frequently a vehicle races up to a signalized intersection hoping to get through before the amber light changes to red. When he doesn't make it in time, he sails through on the red. While this is a dangerous driving practice, it does not excuse the defensive driver from being on guard against it.
2. False. You can't excuse poor driving practice on the grounds that another driver was doing the same thing.
3. True. Although another vehicle obscured your vision, it does not excuse you from proceeding cautiously.
4. False. Mechanical signals are merely an aid to traffic movement. They cannot look and think. Only the driver can do that.
5. True.

TEST YOUR KNOWLEDGE

Match these signs with the information they convey:



DEFENSIVE DRIVING WORKSHOP

Discuss the question: "Is it possible for two cars to have a collision when both drivers are obeying all the traffic rules?" Can you think of an accident situation where this might occur?

SESSION SIX / The Art of Passing and Being Passed

The final two positions of the two-car crash to be discussed are those which involve (1) your vehicle being overtaken and passed by another, and (2) your own passing maneuver.

Both positions—*passing and being passed*—are potentially dangerous since they can result in head-on collisions, sideswipes or run-off-the-road accidents.

Be Alert to Passing Situations

Cars can pass you in a number of ways:

- They can overtake and pass you on a straight road—a normal passing situation.
- They can pass you as you are pulling out of a parking spot.
- They can attempt to pass you when you are passing another vehicle.
- They can pass you on the right; of course, they shouldn't, but this does not relieve you of the responsibility for preventing an accident.

How to Be Passed

There are a number of things you do to prevent the accidents that can happen when other cars pass you:

1. Help the other driver pass. Check oncoming traffic. Slow down if the passing car will need more room to get back in line in front of you.

2. Before you change lanes, check your rear view mirrors and glance back to make sure your blind spot is clear. Use your turn signals. Move over *only* when the lane is clear.
3. Get into the proper lane for a turn *early*. When turning right stay close to the right-hand curb to block anyone from passing on the right. Use your turn signals early.
4. Don't nose out of a parking space to check for oncoming traffic. Take a good look before you move. Signal your intentions, wait for a break in traffic, and pull out promptly.

How to Pass

There are a number of reasons why you may want to pass another vehicle: You may feel it is going too slowly, you may be in a hurry, or you may simply want to be first. There is nothing wrong with passing, but it isn't likely to save you much time. And, since passing is risky business, the best rule is: When in doubt, don't!

In any passing maneuver, there are twelve things you need to do:

1. Decide if the pass is necessary.
2. Make certain you have maintained a safe following distance. This means one car length for every 10 miles of your speed (more when the weather's bad).
3. Check traffic ahead. If your vehicle and an oncoming car are both traveling at 60 mph, you are closing the gap between you at the rate of two miles per minute. Since it takes you 10 seconds to pass the car ahead, the oncoming car must be at least one-half mile away.
4. Check traffic behind before changing lanes: First check your mirror, then your blind spot.
5. Signal before you change lanes.
6. Move into the left lane.
7. Accelerate as you move left.
8. Signal the vehicle you are passing by tapping your horn or flashing your lights.
9. Signal your intention to return to the right lane.
10. Return to the right lane when it is clear.
11. Cancel your directional signal.
12. Resume normal speed as soon as you have completed your passing maneuver.

1. At 60 miles per hour, you should begin your pass six car lengths or 120 feet behind the other vehicle. To this, add 20 feet for your car and 20 feet for the car being passed to figure the point at which your rear bumper is even with his front bumper. (120 plus 20 plus 20 equals 160 feet.)

   You are overtaking the other car at a speed differential of 15 feet (90 minus 75) per second. To travel 160 feet at 15 feet per second would require 10⅔ seconds.

   Since you are traveling at an actual speed of 90 feet per second, in 10⅔ seconds your car will have traveled 10⅔ times 90, or 960 feet.

2. The other car is traveling at 75 feet per second. In 10⅔ seconds, it will have traveled 10⅔ times 75, or 800 feet.

ANSWERS:

Try this piece of traffic arithmetic: Your car is 20 feet long. The car you are passing is 20 feet long.

You are traveling at 60 miles per hour, or 90 feet per second. The car you are passing is traveling at 50 miles per hour, or 75 feet per second. There is no interference from other traffic, the road is straight and dry and the weather is clear. Answer the following questions:

1. From the moment you pull out to pass, how many feet must your car travel to overtake and pass the other car to the point where your rear bumper is exactly even with his front bumper?

2. How many feet will the other car have traveled by the time you reach this point?

ANSWERS:

1. False. You may or may not have been able to do anything else in the situation that developed. The fact that you created the emergency in the first place by passing on a hill makes this accident preventable.

2. False. The oncoming car may have contributed to the emergency, but even if he had been driving within the speed limit, the emergency may well have developed anyway. The main contribution was made by your attempting to pass without being sure of enough clear distance ahead to make the pass safely.

3. True. This would have been the courteous thing to do. But the emergency may have developed too fast for the other driver to realize it and react to it properly.

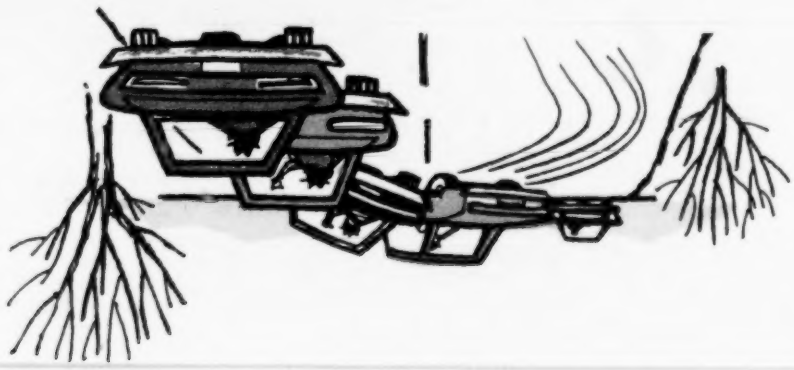
4. True.

5. False. Farm vehicles have a right to be on the road.

ANSWERS:

	TRUE	FALSE
1. The accident was non-preventable because there was nothing else you could have done in the emergency.	____	____
2. The emergency was created entirely by the oncoming car exceeding the speed limit.	____	____
3. In situations of this kind, the car being passed is supposed to slow down, opening up a gap for the passing car to return safely to the right lane.	____	____
4. The accident was preventable because you did not allow enough room to make the pass.	____	____
5. The accident was caused by the slow-moving farm vehicle which had no right to be on the highway.	____	____

BE YOUR OWN TRAFFIC JUDGE



"I was following a long line of cars that had stacked up behind a slow-moving farm vehicle. I had an important appointment in the next town, so I pulled out to pass and had almost passed when an approaching car came in sight from over the hill. It must have been going about 80 miles per hour. I tried to cut into the right lane, but the driver of the car I was passing would not let me in. I pulled in anyway, forcing him off the road and damaging his left front fender. The door on the right side of my vehicle was scraped in."

	TRUE	FALSE
1. The accident was non-preventable because there was nothing else you could have done in the emergency.	____	____
2. The emergency was created entirely by the oncoming car exceeding the speed limit.	____	____
3. In situations of this kind, the car being passed is supposed to slow down, opening up a gap for the passing car to return safely to the right lane.	____	____
4. The accident was preventable because you did not allow enough room to make the pass.	____	____
5. The accident was caused by the slow-moving farm vehicle which had no right to be on the highway.	____	____

ANSWERS:

1. False. You may or may not have been able to do anything else in the situation that developed. The fact that you created the emergency in the first place by passing on a hill makes this accident preventable.

2. False. The oncoming car may have contributed to the emergency, but even if he had been driving within the speed limit, the emergency may well have developed anyway. The main contribution was made by your attempting to pass without being sure of enough clear distance ahead to make the pass safely.

3. True. This would have been the courteous thing to do. But the emergency may have developed too fast for the other driver to realize it and react to it properly.

4. True.

5. False. Farm vehicles have a right to be on the road.

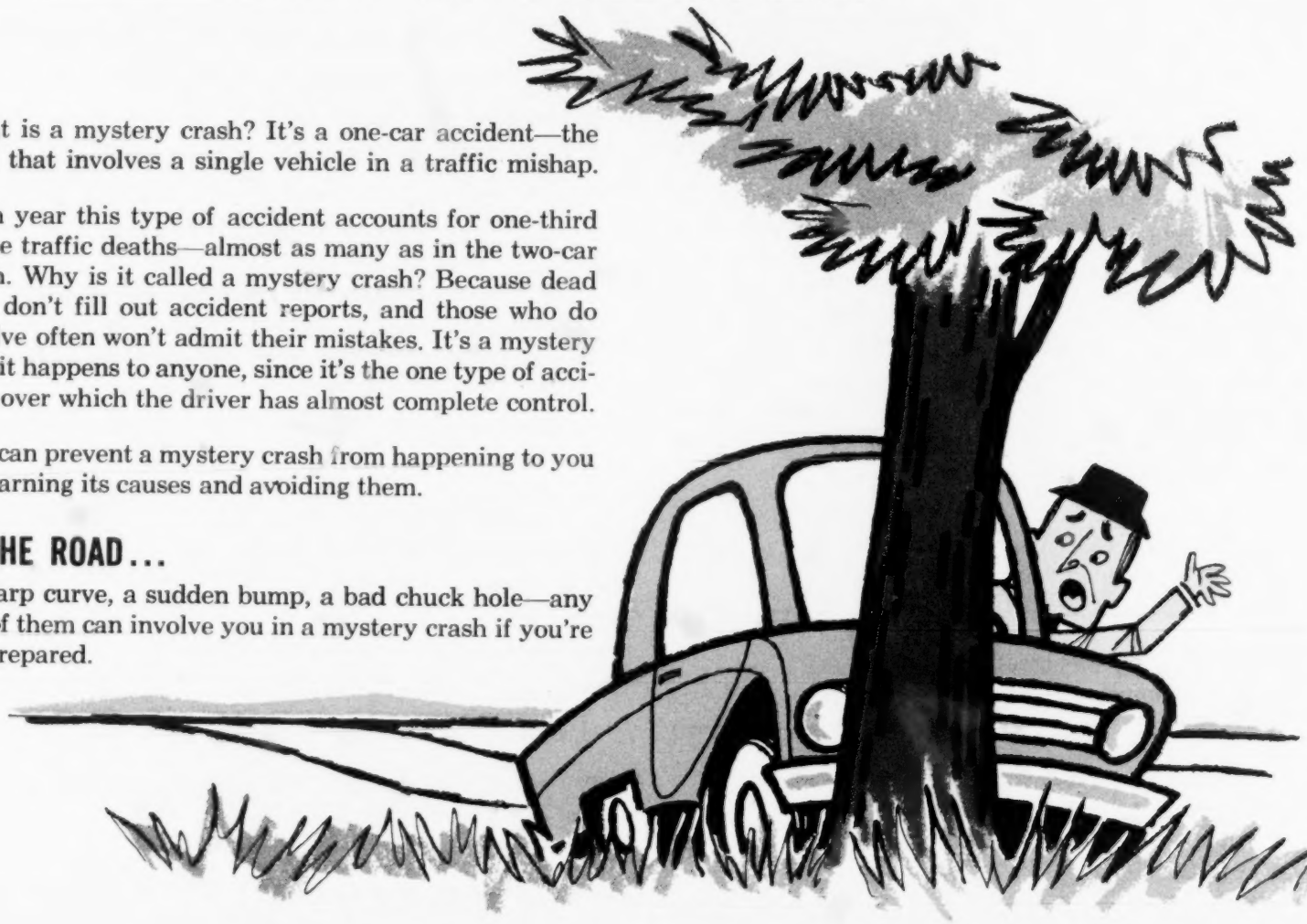
DEFENSIVE DRIVING WORKSHOP

Rules of the Road

Discuss the following on the basis of your state motor vehicle rule book:

1. What is the daytime speed limit? The nighttime speed limit?
2. How old do you have to be to obtain an operator's license?
3. How often does an operator's license have to be renewed?
4. Name three ways in which you may lose your driving privileges.
5. What happens if you are found operating a motor vehicle while your license is under suspension or revocation?
6. What does a flashing red light at an intersection mean? Flashing yellow?
7. What is the proper hand signal for a right turn? Left turn? Stop?
8. What is your state's posted minimum speed?
9. What must you do when you meet or overtake a stopped school bus? What if the roadway is wide and the lanes separated by a median strip?
10. What two things should you do when you see or hear an emergency vehicle approaching?

SESSION SEVEN / The "Mystery Crash"



What is a mystery crash? It's a one-car accident—the kind that involves a single vehicle in a traffic mishap.

Each year this type of accident accounts for one-third of the traffic deaths—almost as many as in the two-car crash. Why is it called a mystery crash? Because dead men don't fill out accident reports, and those who do survive often won't admit their mistakes. It's a mystery why it happens to anyone, since it's the one type of accident over which the driver has almost complete control.

You can prevent a mystery crash from happening to you by learning its causes and avoiding them.

1. THE ROAD...

A sharp curve, a sudden bump, a bad chuck hole—any one of them can involve you in a mystery crash if you're not prepared.

Don't Get Thrown by a Curve

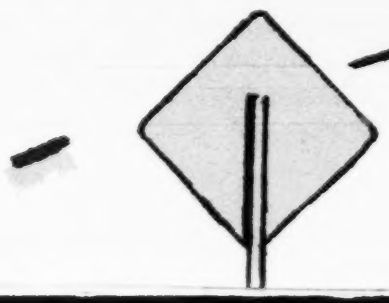
1. Look far down the road so you can see a curve coming up and slow down before you enter it.

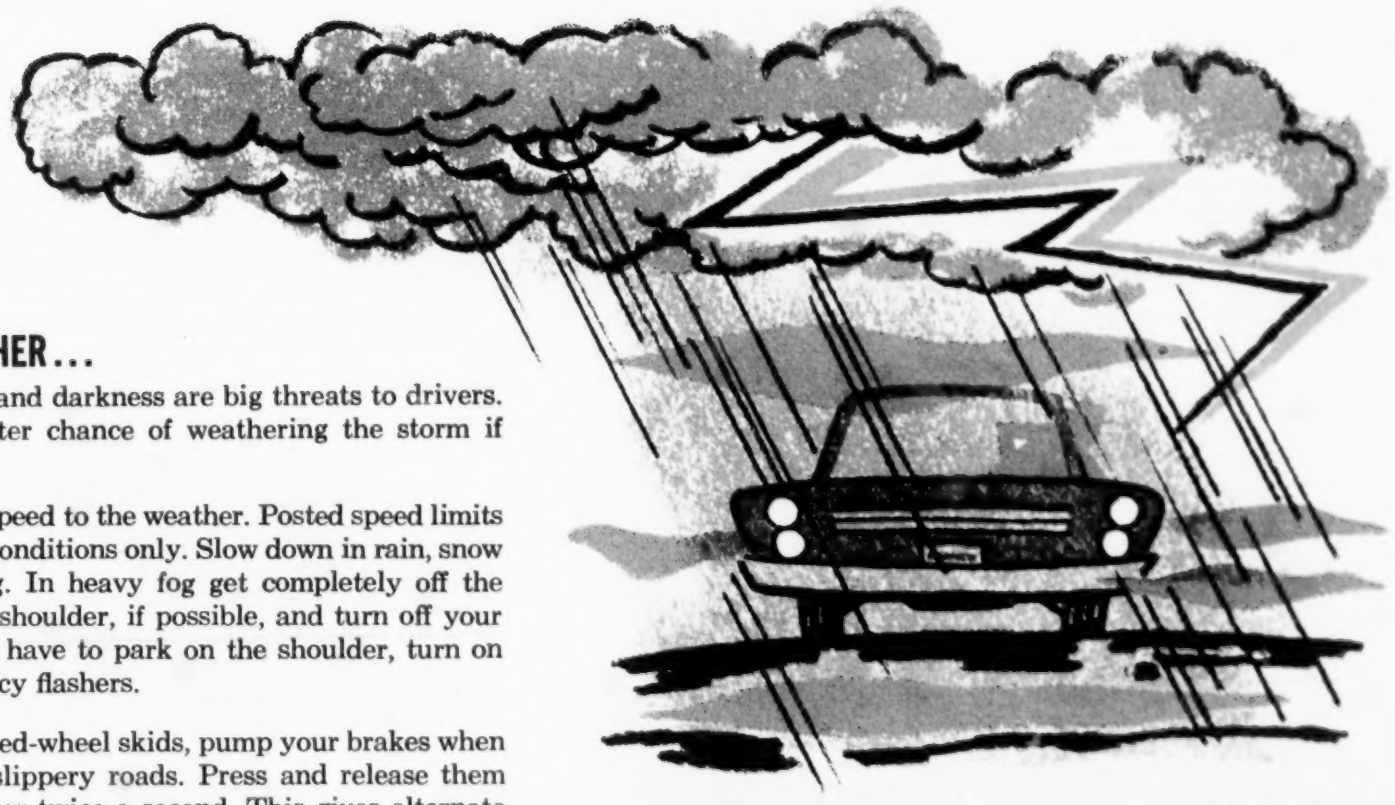
2. Watch for signs warning of curves. They tell the direction and degree of the curve and may suggest a safe speed.

3. Slow down *before* you reach the curve. Once in a curve, don't coast but apply steady power and resume speed as you leave it.

Remember, as many fatal accidents occur on *straight* roads as on curves—so be alert *all* the time.

Be on the lookout for other signs that warn of road hazards—dips, narrow bridges, bumps and railroad tracks. Hitting any one of these hazards at high speed can cause you to lose control—especially if you hit your brakes hard at the same time.





2. THE WEATHER...

Rain, snow, fog and darkness are big threats to drivers. You have a better chance of weathering the storm if you—

1. Adjust your speed to the weather. Posted speed limits are for ideal conditions only. Slow down in rain, snow or patchy fog. In heavy fog get completely off the roadway and shoulder, if possible, and turn off your lights. If you have to park on the shoulder, turn on your emergency flashers.

2. To avoid locked-wheel skids, pump your brakes when stopping on slippery roads. Press and release them quickly once or twice a second. This gives alternate intervals of braking and steering control.

3. If you skid, steer in the direction the back of the vehicle is sliding.

4. Use snow tires, and carry chains for emergencies.

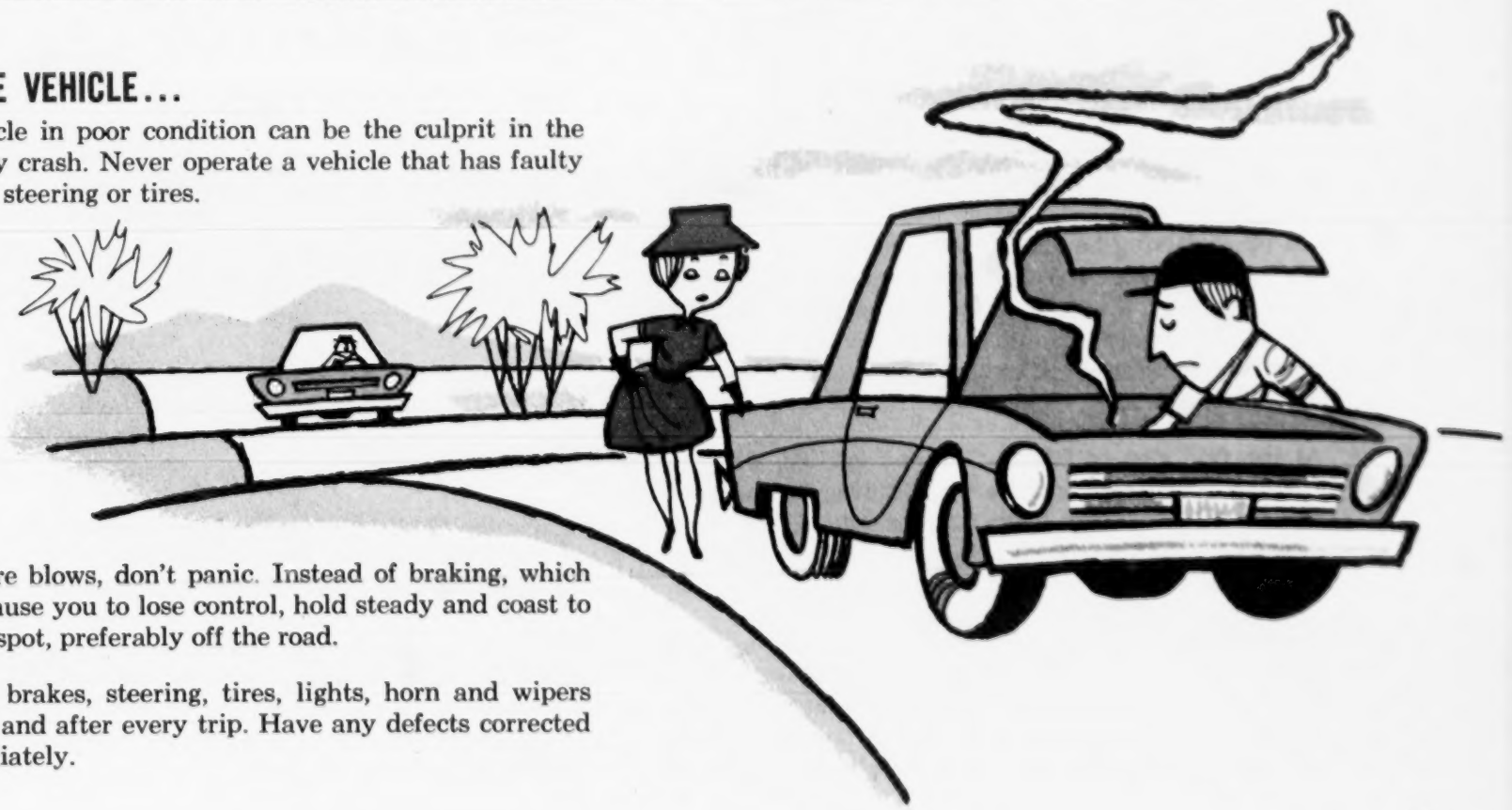
5. The early phase of rain is dangerous because it raises a soapy-slick film of oil and grease drippings. After an hour or so of hard rain, this slick residue is washed off and the pavement has better traction.

6. Wet leaves in the fall trip many motorists. Some must learn the hard way that wet leaves during and after rains can make wet curves feel like they are icy.

7. Speed, wet pavement and bald tires make a combination that can spell hydroplaning, complete loss of steering and brake control. A film of water builds up between your tires and the road. The tires ride on this film of water. Slow down in wet weather. Replace bald tires, because good tread reduces the possibility of hydroplaning.

3. THE VEHICLE...

A vehicle in poor condition can be the culprit in the mystery crash. Never operate a vehicle that has faulty brakes, steering or tires.

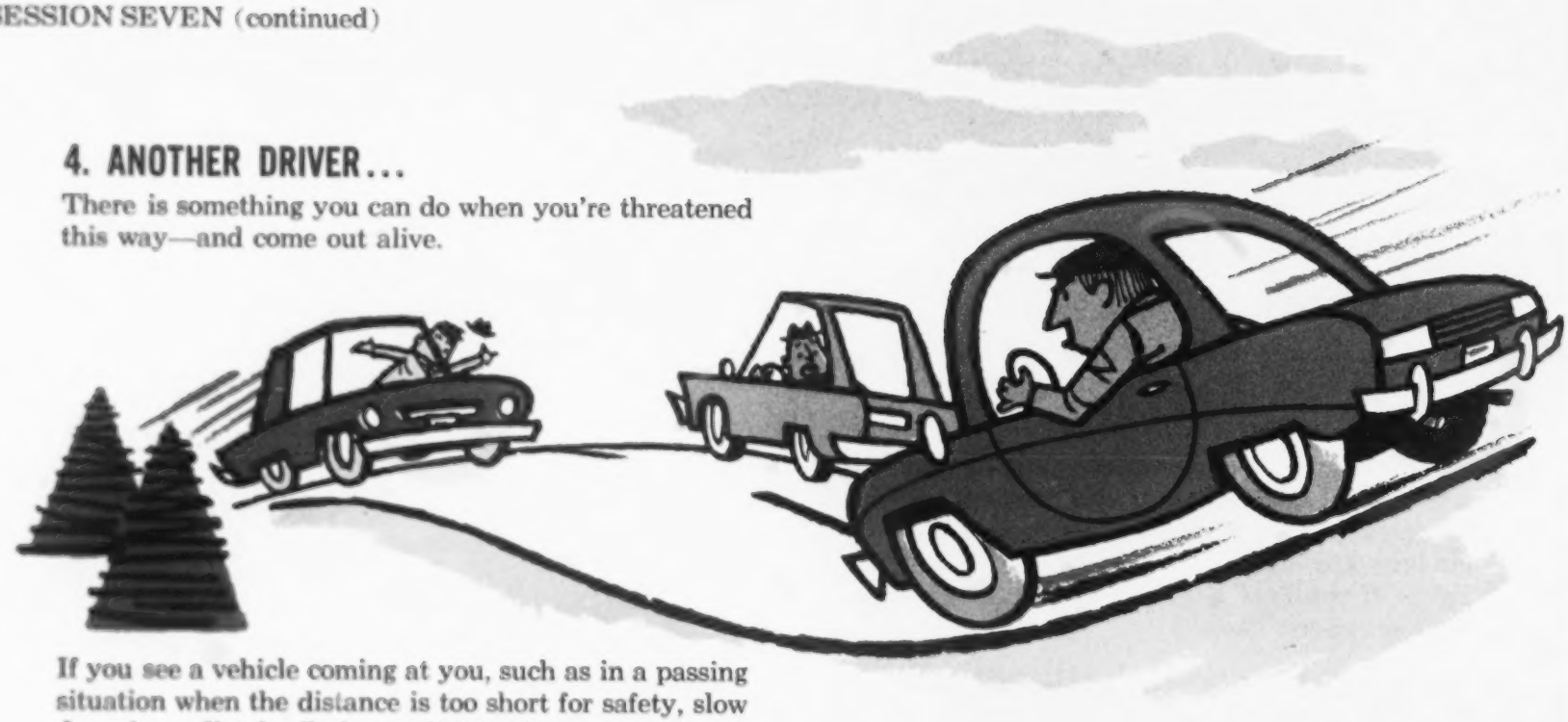


If a tire blows, don't panic. Instead of braking, which may cause you to lose control, hold steady and coast to a safe spot, preferably off the road.

Check brakes, steering, tires, lights, horn and wipers before and after every trip. Have any defects corrected immediately.

4. ANOTHER DRIVER...

There is something you can do when you're threatened this way—and come out alive.



If you see a vehicle coming at you, such as in a passing situation when the distance is too short for safety, slow down immediately, flash your lights, blow your horn and pull to the right as far as possible. Pull onto the shoulder if necessary, but never try to dodge the oncoming vehicle by swerving to the left. The other driver might cut back to his lane when he realizes his predicament, and, if you're there, you'll get hit.

The cause of a mystery crash doesn't have to be coming at you. Another car can suddenly cut in front of you and run you off the road. Remember, the defensive driver takes nothing for granted.

5. YOU, AND HOW YOU FEEL...

All other driving hazards become many times worse if you're not at your physical and mental best. Drinking, drowsiness and illness slow your reflexes. Certain medicines can impair driving performance, and so-called "stay-awake" drugs can actually put you to sleep with your eyes open.

At the first sign of fatigue—droopy eyelids, stiff neck muscles, decreased awareness—pull over at a safe spot and stretch your legs. Take deep breaths. Get a cup of coffee. Then, if you're still drowsy, take a nap. Everyone has a limit to his endurance.

Drugs of many kinds can be deadly to a driver, especially when taken in combination with alcohol. Tranquilizers and antihistamines can cause inattention, confusion and drowsiness, pep pills can interfere with concentration and create false self-confidence. Heavy use of pain killers can put you to sleep at the wheel—permanently. Ask your doctor how the medications you're taking affect your driving.

Alcoholic beverages act on your brain to lessen natural caution, dull reflexes and destroy vital judgment.

Carbon monoxide, the creeping killer that stalks its victims without being seen, smelled or tasted, is produced by all auto and truck engines. Never run the engine in a confined place. Get periodic checks of the exhaust system. Don't tailgate in heavy traffic. If it is not possible to close your trunk lid or keep the rear window of a station wagon closed, open the side windows (not just wing vents) to make sure the car is well ventilated.

Altitude can make you weak, sleepy or dizzy. Stop your car, open the windows and rest until you feel completely normal again. Cut down on smoking in oxygen-thin air. See a doctor if these symptoms recur.

Emotional strain is a poison to the mind and can be particularly serious to a driver. Don't drive if you're upset about something. Avoid quarrels in the car.

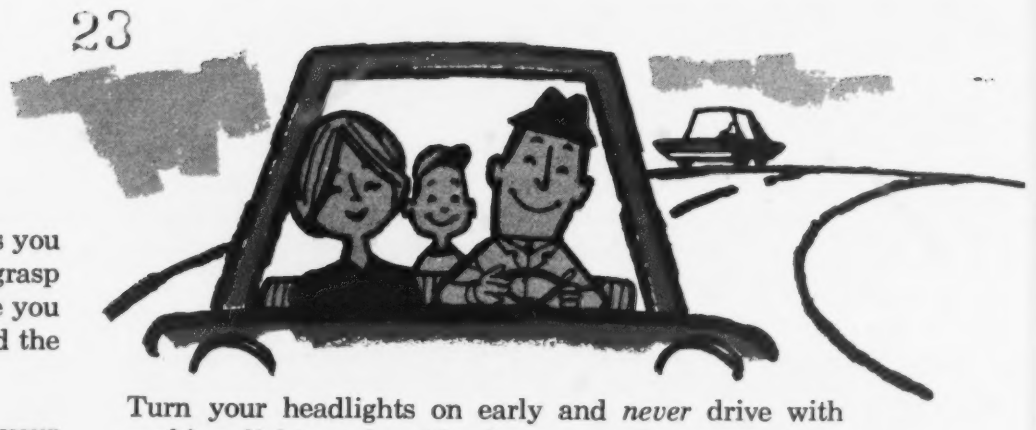
Indigestion and other physical ailments that cause pain and discomfort are always a threat while you're behind the wheel. If you're not feeling up to par, ask someone to help with the driving. If alone, pull off the road for a rest. Stop for a night's sleep at the first opportunity.

6. YOU, AND HOW YOU DRIVE...

Always drive with both hands on the wheel. Unless you grip it firmly, the wheel can be yanked from your grasp by a blowout, a chuck hole or rock, and by the time you have control again, you could be off the road. Hold the wheel firmly but not tensely.

If you have to check a map, fish toll coins from your pocket, shoo a bee, take off your jacket or do anything that takes your hands from the wheel, don't do it while you're moving. Pull over.

Don't be an escape artist—a driver who never sees an accident situation developing until the last second. The defensive driver rarely has to make a panic escape. He checks far ahead for obstacles or difficult traffic situations and drives at controllable speeds.



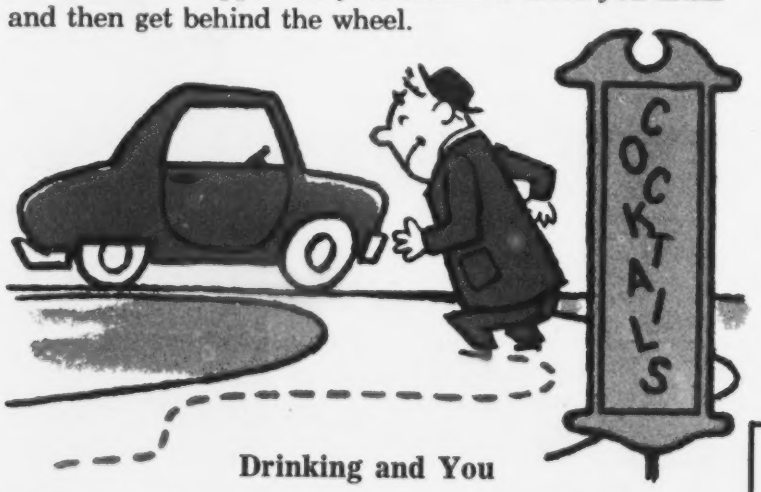
Turn your headlights on early and *never* drive with parking lights only: it's dangerous. Don't overdrive your headlights. Start slowing down immediately if you see something ahead that you can't make out; it could be a farm animal or a stalled vehicle and you'll need the full length of your headlight beams to stop.

Dim your headlights early. Don't look directly into the approaching lights. Watch the right edge of the road or lane marker until the other car's headlight glare is gone. If the other fellow won't dim, don't fight glare with glare.

7. DRINKING AND DRIVING

Most adults drink and most adults drive. Unfortunately they often do both too close together. "If you drink—don't drive" is still recommended as the safest course. But that advice is largely ignored. In our society, there is almost universal acceptance of the tolerant view that a couple of drinks never hurt anyone. So hospitality and drinking—and driving—often go together.

Yet studies of fatal auto accidents show that over 50 per cent of the drivers involved had been drinking. Does this mean that we are a nation of alcoholics? Not at all. It does mean that most drivers are dangerously ignorant of the physiological facts about alcohol. So let's see what happens to your faculties when you drink and then get behind the wheel.



Drinking and You

When alcohol enters your stomach, it's rapidly absorbed into your bloodstream and carried through your body. It quickly reaches your brain and begins to affect its function. This means your judgment is impaired, a false sense of confidence may be developed, field of vision is reduced, hearing is less acute, concentration becomes difficult, and speech and balance are affected. In other words, you start feeling "tipsy."

Once alcohol is in the bloodstream, the body gets rid of it through elimination (about 10 per cent) and by oxidation (about 90 per cent). Oxidation takes place chiefly in the liver through a process that changes the alcohol into acetaldehyde (extremely poisonous), then to acetic acid (found in vinegar), and finally into harmless water and carbon dioxide. The process occurs at a constant rate, and—remember this—it cannot be hurried along by physical exercise, black coffee or cold showers. The only thing such traditional remedies do is turn a sleepy drunk into a wide-awake one. The *only* way to sobriety is the passage of time.

(read upward from bottom of chart)

Amount of Liquor Consumed	Alcohol in Blood—Per Cent	Status (when driving)	Descriptive Effects
			Death—approximate level
?	0.60		
			Coma—approximate level
?	0.50		
		In All States Now ILLEGAL	Gross intoxication — Unmistakable impairment of all physical activity and mental faculties
7-8 oz.	0.15		
up to		In 26 States Now ILLEGAL	Serious impairment of physical and mental functions; loss of judgment and inhibitions—clumsy, uncoordinated
5-6 oz.	0.10		
up to		? ?	Exaggerated emotion and behavior—Less concern, mental relaxation. Decrease in finer skills of coordination
2-3 oz.	0.05		
up to		?	Mild effects—slight change in feeling. Existing mood (anger, elation, etc.) may be heightened
0-0	0.00		

0.10% **CRITICAL LEVEL:**—recommended in *Uniform Vehicle Code (1968 Rev.)*

The question marks in the status column indicate that impairment begins for many people at alcohol concentrations which are well below the illegal level or levels generally associated with intoxication which may be socially acceptable in drinking groups. This has been confirmed repeatedly by driving tests in simulators and on experimental field courses.

Alcohol concentration in the body is related to the person's weight, quantity and kind of food in the stomach, amount of liquor drunk, the time span of the drinking, and how long it has been since the last drink. As an extreme example, a person could sip whiskey at a rate of three-fourths of an ounce per hour, consuming more than a pint in 24 hours, without accumulating enough alcohol in his body to become intoxicated—or even under the influence. On the other hand, eight ounces of 80 to 90 proof liquor consumed in an hour to an hour and one-half by a man weighing 180 pounds would produce alcohol levels in the blood of around 0.15 per cent. This man is at the threshold of gross intoxication and is about 10 hours away from complete elimination of the alcohol in his blood. It is presumptive evidence, in most states, that he is under the influence of alcohol.

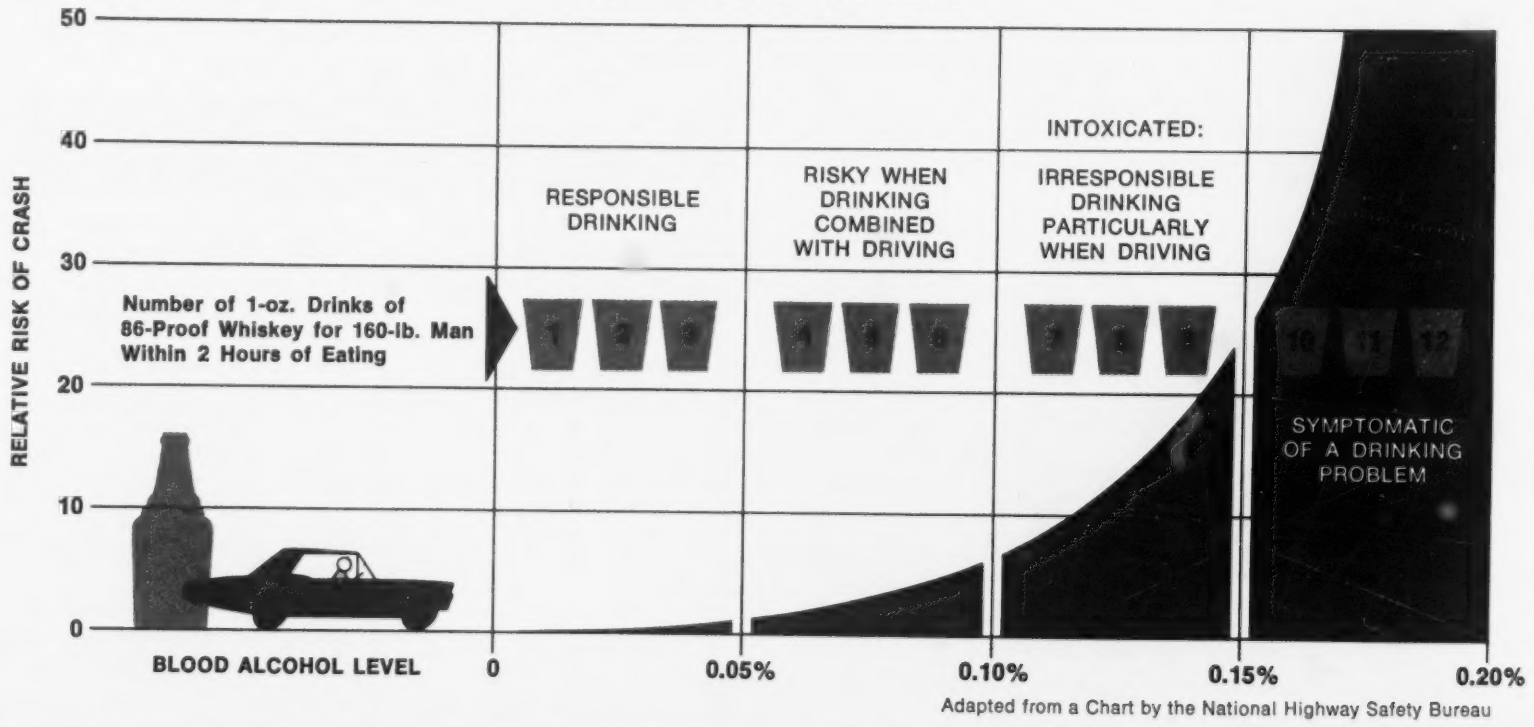
Such a rapid intake of alcohol puts him five hours away from driving with any degree of safety and even then his chances of having an accident are greatly increased. This is shown in the chart showing some of the effects of alcohol at various blood levels.

One of the insidious effects of drinking is that even a little alcohol can make you feel just great and superbly able to handle a car. Because you can't trust your judgment, you should plan in advance how to get home from a party some distance away. You should (1) decide that one person in your car will not drink, or at least will follow the one-for-one rule—no more than one drink an hour and no drink an hour before driving; (2) decide to take a cab or other public transportation; or (3) arrange to have some other person drive you home.

Before you accept a ride with anyone who has been drinking, consider the risk involved. The chance for a serious injury or a fatal accident is just as great for you, the passenger, as if you were driving after drinking.

As a host, you should shut down the bar (without fanfare) at least an hour before you expect your guests to start home. Let them spend some extra time over food and coffee before they leave. Never insist that anyone have "one for the road."

BAR BAROMETER



Adapted from a Chart by the National Highway Safety Bureau

Drinking and the Law

Chemical tests for intoxication were first used in the United States about 40 years ago. Reports endorsing the use of chemical tests for intoxication were issued in 1937 by the American Medical Association and by the National Safety Council. Following World War II, the use of chemical tests for intoxication spread rapidly across the country. Currently, all of the 50 states use them, with 47 states having chemical test legislation providing for presumptive levels of intoxication.

In the Uniform Vehicle Code (1968 Rev.) the legal presumptions based on chemical tests are given as follows:

.10%—Alcohol concentration in the body of .10% or more is prima facie evidence of being under the influence of alcohol.

? —With concentration between 0.05% and 0.10%, there is no presumption either way. The blood level is considered along with other evidence such as speech, gait, etc.

.05%—Alcohol concentration in the body of .05% or less is presumptive evidence of NOT being under the influence of alcohol.

Studies have shown that the relative probability of causing an accident increases rapidly at levels over 0.08 per cent and becomes extremely high at levels above 0.15 per cent. Levels above 0.04 per cent are definitely associated with an increased accident involvement.

In 1953, New York adopted the so-called "implied consent" law. Under this law a driver, by the fact of his license for driving on the highway, consents to a chemical test if arrested for an offense involving driving and drinking. If he refuses, no test will be given, but his license to drive may be revoked because he did not abide by this condition of the driving privilege. In 1962, the implied consent law was included in the Uniform Vehicle Code. Forty-five states now have such legislation.

BE YOUR OWN TRAFFIC JUDGE

"I was traveling along the open highway when I got to feeling drowsy. I decided to stop at the next roadside restaurant and have a cup of coffee to wake me up. I was thinking about how it would feel to be in the warm restaurant drinking a cup of coffee when I ran off the road and smashed into a tree. The front axle of my vehicle was broken and I was cut by flying glass from the windshield."

	TRUE	FALSE
1. This accident was clearly non-preventable because it resulted from psychological forces over which you had no control.	___	___
2. The accident was preventable because you obviously had made yourself unfit for driving by not getting enough rest.	___	___
3. You should not have delayed your stop until reaching the restaurant. You should have stopped by the side of the road and walked or run until you felt wide awake again.	___	___

Answers

1. False. Drowsiness is an insidious accident cause. It can be controlled by being recognized as the hazard it is. You postponed doing anything about it until it was too late. The accident was preventable.

2. False. Drowsiness is not always due to lack of sleep. Persons who regularly get the recommended amount of sleep can become drowsy behind the wheel.

3. True. When drowsy, do something about it immediately. But the first thing to do is to park your car safely off the road.

DEFENSIVE DRIVING WORKSHOP

Do you think people should not drive after drinking? Is it possible for them to police themselves if they understand the one drink/one hour rule of thumb?

SESSION EIGHT / How to Avoid Other Types of Accidents

Together, two-car crashes and "mystery crashes" account for most of the traffic deaths and injuries that occur every year. However, the following types of accidents also take a surprising toll of dead and injured:

Collisions with Pedestrians

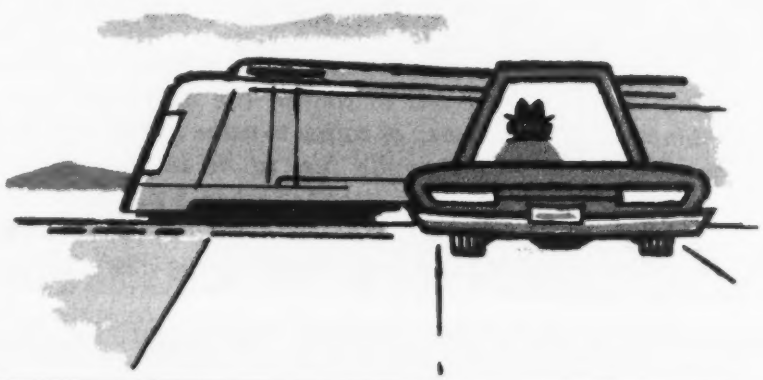
The pedestrian always loses this encounter. In order to avoid such a tragedy a driver must be especially careful of the elderly, the young and drunks. One study of 333 fatal pedestrian accidents revealed that about 45 percent involved a drunken pedestrian. The best rule to follow is: Forget the right-of-way. Let the pedestrian have it rather than take a chance on hitting him.

Collisions with Fixed Objects

A collision with a wall, abutment, or parked car usually results from poor judgment and failure to judge clearance at the sides, front, back and top of your vehicle. Collisions of this type are more likely to occur if you attempt to drive when you are tired or under the influence of drugs or alcohol.

Collisions with Trains

Most collisions with trains occur because of inattentiveness or chance-taking. A reasonable precaution is to slow down when approaching railroad crossings and, if the signals are operating or the barrier is down, to stop not less than 15 feet nor more than 50 feet from the tracks. Make allowances for the "behind schedule" train. Never go through an intersection when the signals are flashing, since a slow train may be hiding a faster train.



Collisions with Bicycles

Most bicycle riders are children who may not know the rules, or have forgotten them. Watch out for cyclists. Tap your horn, and give them plenty of room when you pass. Be particularly watchful for cyclists at night.

Collisions with Animals

Proceed with caution in farm country or in open land where livestock or deer may cross the road. Slow down until you have passed an animal, since it may suddenly dart into your path.

How to Avoid Backing Accidents

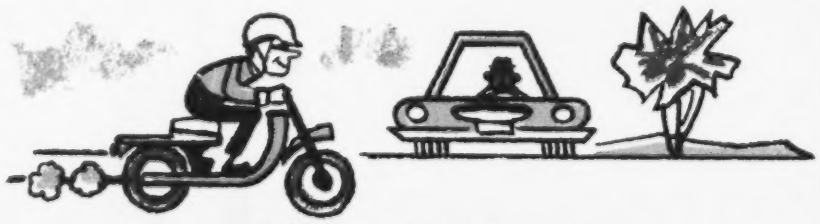
Backing accidents are preventable, and because of the hazards of backing, the defensive driver avoids backing wherever possible by planning his route to eliminate the need for it.

The defensive driver never backs around a corner; if necessary, he will drive around a block to avoid such danger. He doesn't back out of driveways or alleys when he can avoid it. Instead, he drives in and turns around so he can come out head first. When this is not possible, he backs in so that he can head out. He knows it is safer to back out of traffic into a quiet area than to back into the traffic stream.

The defensive driver also is alert to the problems of backing when he parks, and finds backing out of traffic preferable to backing into traffic.

When backing is unavoidable, follow these rules:

1. Get the complete picture before you back, even if you have to get out and walk around your vehicle to do it. After getting the complete picture, start backing *immediately*, before the situation has a chance to change.
2. Back slowly.
3. Check both sides as you back. Use your outside mirrors, both left and right, as often as is necessary during the entire backing movement.
4. Don't depend entirely on mirrors to judge distance to the rear. Mirrors help you check clearances and enable you to spot pedestrians who may unexpectedly move into the path of your vehicle as you back, but they can be deceiving in measuring distance to the rear.



Collisions with Motorcycles

Motorcycles and motorbikes are now a big part of the traffic picture and many operators are inexperienced. Be alert for them and increase your following distance. When you pass, allow them as much room as you would a car.

How to Drive on Expressways

If you travel any distance, you'll be using turnpikes, freeways, expressways, superhighways and thruways. The technique for driving on them is different from that used on regular roads.

Here are driving hints for expressway safety:

1. Keep a full gas tank and check the tires. Study the map before you start; be sure you know your correct exit.
2. Upon entering an expressway, speed up in the acceleration lane so you can match the speed of through traffic and blend right in.
3. Never slow down drastically in the traffic lane. Keep up the pace set by the majority.
4. Don't stop, and *never* back up. If you miss an exit, go on to the next one. In case of vehicle breakdown, pull as far onto the shoulder as you can.
5. When passing or changing lanes, use your turn signals, check to the rear and get into position early. After passing, wait until you can see the vehicle you've passed in your mirror before returning to right lane.
6. Keep widely spaced. Stay well behind vehicles ahead as a precaution against chain-reaction crashes.
7. Read the signs; they are all important. You have little chance for second-guessing.
8. When leaving the expressway, slow down in the deceleration lane to ramp speed. Believe your speedometer, not your senses.

Watch out for fatigue in expressway driving, and fight monotony with a rest at least every two hours; keep your eyes moving, open the windows often, check the instruments, sing, and chew gum.

Never stop on an expressway; pull completely off the road. For help, raise the hood and tie a white cloth on the radio antenna or left door handle.

Night driving on superhighways tempts you to overdrive your headlights. Remember, good lights illuminate something over 350 feet, but at 70 mph it takes 375 feet to stop, so don't drive blind!

In bad weather, expressways can be more dangerous than ordinary roads because of higher speeds. Adjust your driving to bad weather!

These outlines are designed for your convenience in taking notes on the material covered in sessions of the Defensive Driving Course. Major topics to be discussed are listed below each heading.

Session One: **PREVENTABLE OR NOT?**

1. The magnitude of the traffic accident problem._____

_____

_____

2. What is meant by "perfect driving"? —Avoid the following errors:

A_____

B_____

C_____

D_____

E_____

3. An analysis of "preventable" and "non-preventable" accidents.

4. Definition of a preventable accident:

5. How to learn about safety from a study of accident reports.

6. Film – "Who's To Blame."

7. Homework assignment.

Session Two: THE PRACTICE OF DEFENSIVE DRIVING

1. The definition of "defensive driving."

2. Commonly encountered types of adverse driving conditions.

   A. _____ C. _____ E. _____

   B. _____ D. _____ F. _____

3. The use of the standard accident prevention formula.

   A. _____

   B. _____

   C. _____

4. How to carry on a pre-trip mental inventory of driving conditions.

5. The six positions of the two-car crash.

   A. _____ D. _____

   B. _____ E. _____

   C. _____ F. _____

6. The meaning of "following distance."

7. The meaning of "vehicle length."

8. Braking distance and the use of the brake detonator device.

9. Film – "The Car Ahead."

10. Homework assignment.

Session Three: HOW TO AVOID A COLLISION WITH THE VEHICLE BEHIND

1. How to learn about accident factors from newspaper accounts.

2. The five elements of defensive driving.

   A. _____

   B. _____

   C. _____

   D. _____

   E. _____

3. Your responsibilities to the driver behind you.

4. Film – "The Car Behind."

5. Homework assignment.

Session Four: HOW TO AVOID A COLLISION WITH AN ONCOMING VEHICLE

1. Time zones of accident sequence

   A. Pre-crash

   B. Crash

   C. Post-crash

2. The value of seat belts.

3. Reasons why drivers cross the center line.

4. How to avoid collisions while making left turns.

5. Centrifugal force and its effect on curves.

6. Rx for avoiding head-on collision

   A. _____ C. _____

   B. _____ D. _____

7. Film – "The Head-On Crash."

8. Homework assignment.

Session Five: HOW TO AVOID AN INTERSECTION COLLISION

1. Review of "Preventibility."

2. The law regarding the right-of-way at unregulated intersections.

3. The law relating to yield signs.

4. The law relating to stop signs.

5. The law relating to traffic signals.

6. The law relating to traffic policemen.

7. The proper procedure for making a right turn.

8. The proper procedure for making a left turn.

9. The four-point plan for intersection safety.

   A. _____ C. _____

   B. _____ D. _____

10. Homework assignment.

Session Six: THE ART OF PASSING AND BEING PASSED

1. Emotional reactions to being passed.

2. The dangers of being passed.

3. The art of passing.

4. Where is passing illegal?

5. The twelve points of safe passing.

A. _____	E. _____	I. _____
B. _____	F. _____	J. _____
C. _____	G. _____	K. _____
D. _____	H. _____	L. _____

6. Film – "Passing and Being Passed."

7. Homework assignment.

Session Seven: THE "MYSTERY CRASH"

1. The non-collision, run-off-the-road accident.

2. Control and loss of control of a vehicle.

3. Light conditions as a factor in the non-collision accident.

4. Weather conditions as a factor in the non-collision accident.

5. Road conditions as a factor in the non-collision accident.

6. Traffic conditions as a factor in the non-collision accident.

7. Vehicle conditions as a factor in the non-collision accident.

8. Driver condition as a factor in the non-collision accident.

   A. The operation of attention

   B. Inward attention

   C. The effect of drugs

   D. The effect of alcohol.

9. Film – "The Mystery Crash."

10. Homework assignment.

Session Eight: HOW TO AVOID OTHER TYPES OF ACCIDENTS

1. How to avoid vehicle-pedestrian accidents.

2. How to avoid vehicle-fixed object accidents.

3. How to prevent backing accidents.

4. How to avoid vehicle-train accidents.

5. How to avoid vehicle-bicycle accidents.

6. How to avoid vehicle-animal accidents

Key points in Defensive Driving Course.

Application of Defensive Driving Course.

TO ALL DDC GRADUATES

Congratulations on completing the Defensive Driving Course! As a graduate, you join over 3,000,000 other DDC alumni who make up the most safety-minded group of drivers in the world.

I hope the course has given you new and lasting insights into the problem of traffic accidents and what you reasonably can do to prevent them.

But, it takes more than an eight-hour course to make a Defensive Driver. You now begin the most important phase of your experience—the application of Defensive Driving techniques in your daily driving.

In this phase, you must consciously and systematically put into practice behind the wheel what you have learned in the classroom. This means replacing old habits by the repetitive use of new and better habits.

The application phase may be difficult, even uncomfortable, and most assuredly, it will take time. You should expect this. Remember that safety is not passive. It is an active attitude of awareness toward the hazards of any trip. It requires a continual application of knowledge, alertness, foresight, judgment and skill.

Once these habits are established, Defensive Driving will become almost automatic for you. But even after the habit has been formed, you will need to pay continuous attention to your driving technique to avoid slipping back to old ways.

Defensive Driving does have its costs in terms of mental and physical effort. Fortunately, the pay-off is more freedom from accidents. It is the best investment any driver can make.

The National Safety Council is honored that you have participated in the program. We hope you will want to continue your association with concerned and well-trained drivers by joining the Defensive Driving League—an organization of DDC graduates dedicated to personal responsibility for Driver Safety, Driver Citizenship and Driver Courtesy.

Thank you for participating and best wishes for a lifetime of "Perfect Trips."

H Howard Pyle

Howard Pyle

FINAL EXAMINATION/ Defensive Driving Course

● **Part I.** Multiple-Choice. Circle the letter preceding the correct answer.

1. Approximately (a.) 250, (b.) 150, (c.) 75, people die in traffic accidents in the United States every day.

2. The single most significant cause of fatalities, serious injuries and property damage is: (a.) the one-car, or "mystery crash," (b.) the two-car crash, (c.) the rear-end collision.

3. The most effective way to deal with a tailgater is: (a.) slam on your brakes to give him a scare, (b.) speed up to increase the distance between your vehicles, (c.) slow down to force him either to pass or slow down.

4. On a right-hand curve, centrifugal force will tend to pull your car to (a.) the left, (b.) the right.

5. While waiting to make a left turn, have your wheels pointing (a.) straight ahead, (b.) turned to the left.

6. Your maximum nighttime seeing distance with headlights on upper beam on an unlighted road is (a.) 255 feet, (b.) 366 feet, (c.) 488 feet.

7. When approaching an intersection, look first to the (a.) right, (b.) left.

8. In negotiating curves, slow down (a.) before you reach, (b.) after you are in, the curve.

● **Part II.** True-False. Circle T if statement is true; F if it is false.

1. The federal government has relatively little concern with traffic safety. T F

2. Reaction distance is the number of feet your car travels between the time your foot hits the brake and the point at which you are able to bring your car to a halt. T F

3. After the stop light turns green, you should count slowly to three before you go. T F

4. Mystery crashes are accidents over which the drivers involved had little or no control. T F

5. If your right wheel drops off the pavement while you are traveling at high speed, brake and steer sharply to the left. T F

6. If a tire blows, don't brake, but hold the wheel steady and coast to a spot that is safely off the road. T F

7. If you see a car coming at you headon, signal him with your lights and horn and then swerve to the left to avoid a collision. T F

8. The best rule to follow is to always give the pedestrian the right of way. T F

● **Part III. Fill-in. Fill in the blanks to complete the following sentences.**

1. Defensive driving is driving so as to prevent accidents in spite of the_____ or the _____.

2. Perfect driving, by definition, involves the ability to complete a trip without_____, _____, _____, _____, and_____.

3. List the six positions your car can take in relation to another in order to be involved in a two-car crash.

   1. _____ 4. _____

   2. _____ 5. _____

   3. _____ 6. _____

4. _____ + _____ = Stopping distance.

5. Compute the reaction distance for the following speeds:

Speed	*Reaction distance (in feet)*
a. 45 mph	a. _____
b. 55 mph	b. _____
c. 70 mph	c. _____

6. The likelihood of a rear-end collision can be reduced if you allow_____car length for every_____ mph of speed under ideal conditions.

7. In order to avoid an intersection collision you need to know your_____. Plan ahead; slow for_____. Expect the_____; show your_____by using your signals; and go with _____.

8. Tailgating in heavy traffic or driving with all the windows closed are hazardous practices because of the dangers of_____poisoning. Help combat this danger by having your vehicle checked for a possible fault in the_____.

ANSWERS:

Part I: 1. (b.) 2. (b.) 3. (c.) 4. (a.) 5. (a.) 6. (b.) 7. (b.) 8. (a.). **Part II:** 1. F, 2. F, 3. T, 4. F, 5. F, 6. T, 7. F, 8. T. **Part III:** 1. the actions of others, presence of adverse driving conditions. 2. without accidents, traffic violations, vehicle abuse, schedule delays, and discourtesy. 3. ahead, following, meeting, intersecting, passing, being passed. 4. reaction distance + braking distance. 5. a. 49, b. 60, c. 77. 6. one, ten. 7. route, intersections, unexpected, intentions, care. 8. carbon monoxide, exhaust system.

CONGRATULATIONS
on becoming a DDC Graduate!

But don't rest on your diploma . . .

Graduation is a beginning, not an ending. How you apply your new knowledge, how you now react on the highway—that's the true test of your defensive driving skills. And excellent as those skills may be, there's a way you can keep improving them . . . keep them razor-sharp . . . keep yourself alive.

JOIN THE DEFENSIVE DRIVING LEAGUE

As a Defensive Driving Course graduate, you are now eligible to join an elite group of concerned and well-trained drivers—the Defensive Driving League. The League is the *only* national organization devoted exclusively to achieving safer highways through voluntary individual excellence behind the wheel.

The League goal is simple but vital: to improve driver skills and attitudes, to promote courtesy and cooperation among all highway users, to support sound traffic safety programs, and to obtain better services for the automobile owner.

The League motto is "Traffic Safety Begins with Me" and its Creed appears on the reverse page. If you share these beliefs, the League needs your support and you need the League.

The League offers you a professionally planned safety program designed to sustain the high-level defensive driving performance demanded of the safest drivers in the world.

LOOK WHAT YOU GET FOR ONLY $5.00 A YEAR!

Defensive Driving League Bulletin. A monthly Bulletin especially prepared to keep you reminded of DDC concepts and applications to new problems. Through opinion surveys and letters, the Bulletin will serve as the voice of the most safety-minded segment of the driving population. It will speak out on such consumer concerns as auto safety features, improved automotive products and services, and constructive traffic safety programs.

Safe Driver Magazine. A monthly eight-page, pocket-size magazine—newsy, informative, thought-provoking—designed for quick reading but memorable impact.

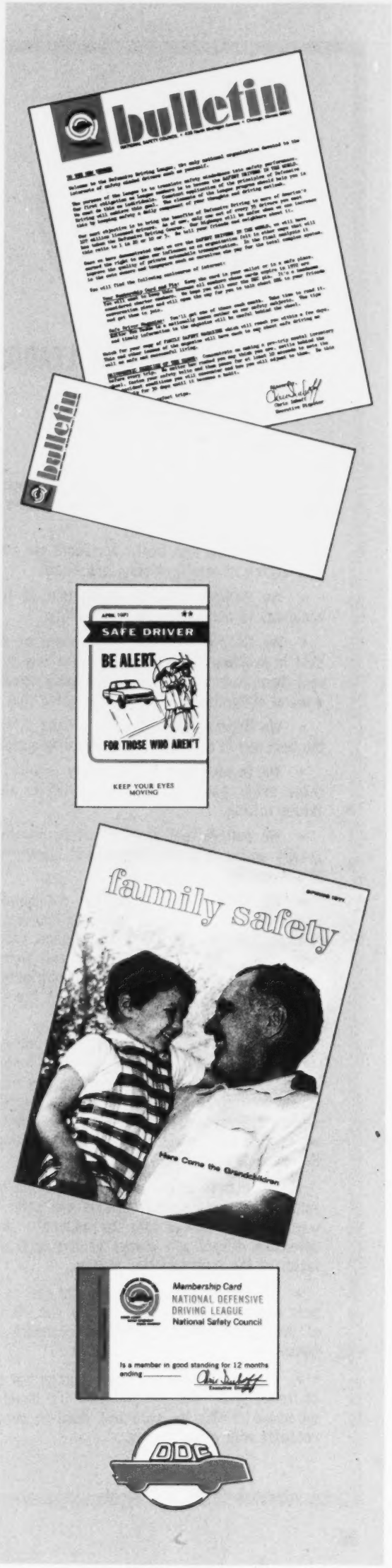
Family Safety Magazine. A 32-page quarterly magazine that has won acceptance from more than a million and a half readers as the leading consumer periodical in the safety field. It covers home and recreational safety as well as traffic accident prevention. Its authoritative articles will inform League members on the entire range of family safety interests.

Membership Card. A wallet-size card, bearing the Defensive Driving League emblem, identifies you as a responsible, safety-conscious driver.

Membership Pin. A handsome red and gold League emblem with clutch-back fastener that you can wear proudly as a defensive driver who cares about highway safety.

Add it all up! The low membership fee of only $5.00 a year will keep you informed, keep you involved—and it may keep you alive! Use the application on the reverse side.

Join the Defensive Driving League Now!



THE DEFENSIVE DRIVING LEAGUE

DDC DEFENSIVE DRIVING COURSE

DEFENSIVE DRIVING LEAGUE

CREED

- We Believe that safe, efficient, and economical transportation by private motor vehicles is a positive good.
- We Believe that traffic accidents are a needless source of waste, misery, and death.
- We Believe that the prevention of traffic accidents is our common responsibility.
- We Believe that the development of driver skill in avoiding accidents is the best way to prevent them; from this it follows that every driver has a moral obligation to work at developing this skill.
- We Believe that defensive driving offers us the best way to develop skills in avoiding accidents.
- We Believe that traffic safety requires that these skills, once learned, be applied to all our future driving.
- We Believe that group effort by drivers will greatly assist in the application of learned skills to our driving.
- We Believe that driving an automobile in traffic is a social activity requiring courtesy and consideration for the rights, convenience, and feelings of other users of the streets and highways, and that this attitude is a positive contribution to the harmony, efficiency, and safety of the transportation system.
- We Believe that we should study and understand as fully as possible the technique employed in the administration of all aspects of the nation's traffic control program; that we should lend discriminating support to official programs; and that we may be able to offer creative contributions to the solution of the problem.
- We Believe in the value of all efforts to develop more crash-worthy vehicles and safer highways, but we believe that the collective skill of defensive drivers will always be the chief safety factor of the transportation system.
- We Believe that the quality and cost of products and services affect the safety and efficiency of the system and are the proper concern of all consumers.
- We Believe that it is important to the cause of traffic safety that we exemplify the benefits of defensive driving by word and deed in our daily contacts with other drivers.

MEMBERSHIP APPLICATION FORM
DEFENSIVE DRIVING LEAGUE

I agree that traffic safety begins with me and I subscribe to the objectives of the Defensive Driving League. Please enter my membership according to the information submitted below.

_____
(Signature)

The serial number of my graduation card from the Defensive Driving Course is. | | | | | | | | |

_____
(Date of graduation)

SAMPLE ENTRY

To assist us in setting up your membership properly and accurately, complete the blanks below by printing a letter or punctuation mark in the boxes provided. For example:

NAME
JOHN A. SMITH

NAME

STREET ADDRESS

CITY AND STATE

ZIP CODE

NAME OF AUTOMOBILE INSURANCE COMPANY

MAKE OF AUTOMOBILE YEAR

This is to certify that the above applicant is eligible for membership in the Defensive Driving League:

_____ _____
(Signature of Cooperating Agency Official) (Agency code no.)

_____
(Date of application)

Mail this completed application with check or money order for $5.00 to:

NATIONAL SAFETY COUNCIL 425 N. Michigan Avenue, Chicago, Illinois 60611

Or forward application through your cooperating agency.

DEFENSIVE DRIVER'S MANUAL

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SENSE AND NONSENSE ABOUT
SAFETY BELTS

Safety belts save lives. Just how many lives could be saved each year if every motorist used seat belts and harnesses all the time is open to speculation, but authorities estimate the number to be at least 5,000. However, in spite of the fact that the value of safety belts has been documented by massive evidence, many drivers and riders still refuse to wear them, or wear them only part of the time. The reasons given for not using safety belts all have one thing in common—fallacy. See if you recognize any of the following nonsense reasons for not using safety belts:

NONSENSE

"Safety belts are all right on long trips, but they're a nuisance when I'm just driving around town."

SENSE

Half of all traffic deaths occur within 25 miles of home, and at speeds of 40 mph or less.

NONSENSE

"Some people are thrown clear in a crash and walk away with hardly a scratch."

SENSE

The chance of surviving a crash is five times as good if you stay inside the car.

NONSENSE

"If my car catches on fire or goes under water, I don't want to be trapped by a safety belt."

SENSE

Fire occurs in only 0.2 percent and submersion in only 0.3 percent of all injury-producing accidents. Even then, your safety belt can increase your chances of escape by keeping you from being knocked unconscious.

NONSENSE

"Good drivers don't need them. I've never had an accident."

SENSE

Four out of five drivers in accidents never had one before. Besides reducing injuries and saving lives in accidents, safety belts are comfortable, give you better control, and make you less tired. Once the safety belt habit is acquired, you will automatically reach for them *every* time you get in a car. Here are 7 tips for safety belt use:

1. For the best protection, use a belt bearing the seal of the American Seat Belt Council or Underwriters Laboratories.
2. Make sure the belt is snug. Every inch you are held back from dash or windshield may be the critical distance. Secure the belt over the hip bones, not the abdomen.
3. The annoyance of the loose belt end being caught in the door can be avoided in various ways. Form the habit of tucking it out of the way, buy an inexpensive device that reels it up, or attach a small magnet to the end of the seat and place the belt metal on it as you get out.
4. Rear safety belts are just as vital as those in front, not only to protect rear passengers but to keep from being catapulted into the front seat occupants. Center seat belts should be installed front and rear if those seats are used.
5. Never wear the shoulder harness belt without also wearing the lap belt.
6. Know your belt. When riding in a car with belts you're not familiar with, adjust them and know where the quick release is located.
7. Never put two people in one belt, even small children. A harness is best for a small child but the regular lap belt can be used usually from age three.

THE PROBLEM OF AUTOMOBILE THEFT

Excluding your home, probably the most expensive single item you will buy is your automobile, and your automobile purchases during a life-time will probably exceed the cost of your home. Unlike your home, your car is mobile and must often be left unattended on the public streets, in danger of being stolen.

Criminals, particularly young ones, have recognized the vulnerability and value of the car. Almost 1,000,000 cars are stolen each year in the United States, at the rate of more than one every minute. Although there are more cars on the streets every year, the percentage of increase in thefts has risen more than three times the percentage of increase in registrations.

More than 86 percent of the vehicles stolen each year are recovered. However, the value of the 14 percent not recovered exceeds $100,000,000. Also, the 86 percent which are recovered are frequently returned to the owner with serious damage.

Stolen cars are also a threat to other drivers. A study conducted by the U. S. Department of Justice revealed that 17 percent of all stolen cars become involved in accidents after the theft. This is over 200 times the normal accident rate.

How Can You Prevent Your Car From Being Stolen?

There are 10 steps you can take to lessen the chance of your being a car theft victim. Close adherence to each of these steps will almost guarantee the thief will bypass your car in search for greener pastures:

1. When you park, close all windows tightly and lock the ignition (and steering wheel if possible) and all doors and take the key with you. This simple act will prevent most thefts. A study showed that over three-quarters of all cars stolen were parked unlocked, and almost three-fifths of such cars had the key in the ignition.
2. Do not leave packages, bags or valuables in the parked car. Even an empty bag or box will attract a thief. Place all these items in the trunk, but don't make the transfer at the place you intend to park—do it at another location.
3. Park in well-lighted, busy areas. Avoid dark alleys and shaded sidestreets.
4. Install an alarm in your car.
5. Guard your car keys. If a thief can obtain temporary possession, he can duplicate them for future use.
6. Do not leave the registration papers in the vehicle when you park. They give the thief excellent authority to have the car.
7. When you enter your car, immediately lock all doors. This will prevent an unauthorized passenger from entering.
8. Do not pick up hitchhikers.
9. Demand a claim check when parking at a lot or garage.
10. Buy your car and parts only from reputable dealers. If the market for stolen items is closed off, the professional thief is discouraged.

THE PROBLEMS OF LITTER

What does litter have to do with defensive driving? Being a defensive driver involves more than just practicing defensive driving principles. It means being a responsible, courteous, and mature driver. It means obeying all laws, including ones against littering. Tossing trash from an automobile is the same sort of carelessness that usually marks a bad driver.

What's good about litter?

There's nothing good about litter! Litter is an eyesore as well as a health and safety menace. It destroys the natural beauty of the country, drives away tourists, lowers property values, and causes accidents. And it's very costly.

- Litter cleanup costs U. S. taxpayers an estimated $500 million annually. More than $100 million of that amount is spent each year to clean up primary highways. Countless additional millions are allocated for litter removal from streets, beaches, parks and other public places.
- One state reported 621 accidents caused by vehicles striking or swerving to avoid foreign objects on the road. Of these, 261 resulted in personal injury and 360 in property damage with an economic loss of $611,000. Litter may be the direct cause of many "mystery crashes."

What can be done about litter?

Plenty! What most litterbugs do not realize is that each scrap of paper, each used matchbook, each empty can or bottle contributes to the problem. Curtailing litter must start with the individual. It can be compared with defensive driving as both are individual courses of action. Each person must decide to accept the responsibility that "litter spreading stops with me."

The most important anti-litter device for the individual motorist is the litterbag or other portable container kept in the car. Once the practice of keeping a litterbag has been established, the motorist will find it easy to resist the temptation to toss that gum wrapper out the window. By practicing good motoring manners, the driver will demonstrate the courtesy that marks a safe, skilled driver and he will be cooperating with the many national and local organizations whose efforts are directed toward keeping our highways and recreation areas clean. And, he will not be contributing to someone's accident.

DRIVING EMERGENCIES

WOULD YOU KNOW WHAT TO DO?

You're behind the wheel of your car, driving at a brisk clip on the open highway. Suddenly, a car from the opposite traffic lane swerves directly into your lane and speeds toward you on a collision course.

Would you know what to do? Or would you panic? Would you do the wrong thing, or would you choose the right defensive action to put the odds in your favor?

Emergency situations are a threat anytime you're at the wheel of your car. A panic reaction could be disastrous. Your very survival may depend on two things: your ability to stay calm, and your knowledge of the best defensive action to take.

Obviously you can't "practice" an emergency driving situation. So the next best thing is to develop the skill and know-how beforehand—in your mind. You must visualize in advance emergencies that might confront you, and plan mentally the defensive action you will take.

You can do this by studying the advice of the experts. Any of the following emergencies could happen to you—maybe today. Fix in your mind—*now*—what you should do if any of them happened to you.

YOUR BRAKES FAIL

You step on the brake—and the pedal slaps uselessly on the floor. It's a terrifying experience!

If there was any resistance, pump the pedal. You may be able to work up enough pressure to help some.

If there is no pressure and the way is clear ahead, coast in drive gear and use the parking brake. If you need to slow faster, shift into a lower forward gear and let engine compression help.

On a hill or mountain grade, you're in trouble. Look for something to sideswipe—roadside brush, a snowbank, a guardrail, even parked cars. (Dented sheet metal can be repaired.)

Use your horn or lights to warn other drivers and pedestrians that you are out of control.

YOU GO INTO A SKID

Abrupt turns, sudden lane changes or hard braking can throw you into a dangerous skid, especially on wet or icy roads.

If your rear end starts to slide, take your foot off the gas at once.

Your first instinct may be to turn hard away from the direction of the skid. Don't! That will *really* spin you into a crash.

Instead, turn your wheels in the same direction the rear of the car is skidding. But be careful about it—don't oversteer. You'll be able to "feel" when the car regains rolling traction. Then straighten the wheels.

By all means, *never* hit the brakes during a side skid correction. For the fastest stop with the least chance of causing a side skid, pump your brakes with a hard, *rapid* jabbing and releasing of the brakes.

YOUR ACCELERATOR STICKS

You let up on the gas pedal and nothing happens. Keep cool—this is one of the easiest of driving emergencies to handle.

If you're on the open highway and there's plenty of room ahead, try to pull the pedal up with the toe of your shoe or have a front seat passenger do it. Don't reach down yourself and take your attention from the road. But on some cars there is no connection between the pedal and throttle linkage; check the type you have.

If there isn't time, simply turn off the ignition and brake to a stop. But remember—with power brakes and steering, turning off the engine will make steering and braking hard work. Be ready for the stiffness and bear down.

If a quick stop or maneuvering is necessary, you *can* leave the power on and shift into neutral or depress the clutch. But get stopped in a hurry and shut off the engine at once—a motor racing without load can tear itself to pieces quickly.

YOU HAVE A BLOWOUT

Keep a firm and steady grip on the steering wheel—and don't oversteer to correct the swerve or pull. If a front tire goes, there will be a strong pull toward the side with the blowout. A rear blowout tends to cause weaving of the rear end.

Above all, don't slam on the brakes! Brake smoothly—but easy does it. Sudden braking may throw you into a spin or out of control.

Get onto the shoulder and limp along until you find a place level enough to change the tire safely. Day or night, set out flares or other warning device and turn on flashers.

YOUR HEADLIGHTS GO OUT

There's only one thing to do if your headlights go out and you're suddenly plunged into darkness—hold a straight steering course and brake as hard as you can without throwing yourself into a skid. Then ease onto the shoulder as far from a traffic lane as you can get. The idea is to pull your speed down quickly before a slight steering error takes you off the road.

Once stopped, set out flares or use a flashlight to warn oncoming traffic. Use the four-way flasher if they are operable.

If everything is dead—radio, blower, interior lights, etc. —the problem probably is the battery cables. Check the terminals at both ends.

If only the headlamps are out, the circuit breaker has opened. Since it is heat actuated, it should open and close, giving you intermittent light to help you to safety.

YOUR CAR CATCHES FIRE

Most car fires are caused by a short circuit in the electrical system.

It's almost impossible to disconnect battery terminals without tools. So don't waste time. Get the jack handle from the trunk and rip loose any burning wires. They are a lot less expensive to replace than a burned-out car.

If you don't carry a fire extinguisher, try to smother burning wires with a large article of clothing. Don't grab burning wires with your bare hands; use a heavy cloth or article of clothing because an electrical burn can be serious (while autos use only 12 volts, amperage or current can be relatively high in a malfunction.

If the fire is beyond your control, get away from the car before the gas tank explodes. Try to flag down a trucker —they usually carry efficient extinguishers.

YOU MUST STOP ON A HIGHWAY

On an expressway with paved shoulders, signal and pull off at near traffic speed, then slow down. Where the shoulder is unpaved, signal a right turn and slow down to a safe speed before turning off.

Leave low-beam headlights on in dusk, darkness or bad weather, turn on interior lights and four-way flashers if you have them.

If you must stop close to a traffic lane, on a curve, over a hill or in any risky location, get everyone out of the car and well away from traffic. By all means, don't obscure taillights at night by standing or working behind car.

Day or night, place a flare or other warning device just behind the car and another at least 300 feet back (that's about 120 paces).

Raise the hood and tie a white handkerchief to the antenna or left door handle as a signal if you need help.

YOUR HOOD FLIES UP

Brake smoothly and ease onto the shoulder. You'll have to depend on the view from your left window for steering reference. Or on some cars you may be able to peek through the gap under the hinge edge of the hood.

Make it a habit to check whether the attendant securely latched the hood after a service station stop.

YOU ARE ON A COLLISION COURSE

Suddenly your blood chills! Another car is speeding toward you in your lane—a head-on crash looms!

Is he drunk, asleep, ill, inattentive—no matter. You'll need to keep all your wits about you to avoid the worst of all highway accidents.

Brake hard—every mile you take off your speed reduces the impact force. Head for the right shoulder and give him the entire road. If there's time, lean on the horn and flash your lights.

If he continues toward you, take the ditch or any open ground to the right free of solid obstructions. Remember that any alternative, even a roll-over, gives you a better chance than a head-on collision.

Whatever you do, don't try to outguess him and swerve to the left around him. He may recover at the last instant and instinctively veer back into his own lane—to hit you head-on.

YOUR CAR PLUNGES INTO WATER

Submersion is about the most unpredictable of all auto accidents, both in the way the car will perform and the way people will act. Water causes more unreasoning panic than any other emergency.

A few tips have grown out of actual tests:

A car with windows and doors closed will float from 3 to 10 minutes. The best escape route is through a window. It is difficult to open a door against water pressure, but a window can be rolled down easily.

Power windows may short out, so try to open them immediately. Tempered glass in the side and rear windows of today's cars can be broken only with a heavy, hard object.

A front-engine car will sink nose first, and some air may be pushed to the rear near the roof. When pressure inside and out is equalized, it is easier to open a door.

Remember that 3 to 5 minutes is a lot of time in an emergency. If your seat belts are fastened so you won't be knocked out—and if you keep your head—there's usually time to escape.

PROBLEMS WITH PEDESTRIANS

Vehicle-pedestrian collisions account for 9,800 deaths and 150,000 disabling injuries annually. This toll represents about 20 per cent of all traffic deaths and 8 per cent of all disabling injuries, and for obvious reasons, this type of collision has a high pedestrian death rate.

When a car hits a pedestrian, the pedestrian can do very little damage to the car, but the car can do a great deal of harm to the pedestrian. When two vehicles collide, a personal injury or death occurs only about 20 per cent of the time. But a vehicle-pedestrian accident results in personal injury or death for the pedestrian in almost every case.

The long-range defense against the pedestrian accident requires education so that each class of highway user may appreciate the unique problems of the other. Since all drivers are also pedestrians as soon as they park their cars, Defensive Drivers have a special reason for being actively concerned about the pedestrian problem. And, more obviously, no driver wants to be responsible for injuring or killing another person.

Since pedestrians can walk into the path of a car anywhere, at any hour of the day or night, it is difficult to develop a defensive formula or "put a handle" on the problem from the standpoint of defensive driving except to use the rather general admonition to be careful of pedestrians and to give them the right of way.

Drivers and pedestrians both need to understand that the four main factors in pedestrian fatalities are: 1) the young pedestrian (up to 14 years of age); 2) the older pedestrian (65 and over); 3) the drinking pedestrian; and, 4) the invisible pedestrian in darkness.

Pedestrian Rights

Unlike drivers, pedestrians do not need to comply with a licensing law, or meet an age requirement. Therefore, all kinds and ages of people walk on streets and highways. When they walk with due care and attention, they are protected by such basic rights as: 1) priority of right in using pedestrian crosswalks; 2) the right to use the crosswalk at a signalized intersection during a green or WALK indication, without being subjected to hazard from vehicles; 3) the right to priority use of crosswalks where or when signals are not in operation, so long as they show proper regard for approaching vehicles in their side of the roadway; 4) the right to walk on the left side facing traffic along or upon a highway without sidewalks; 5) with certain exceptions, the right to cross a roadway at places other than a crosswalk, but only by yielding right-of-way to all vehicles and 6) the fundamental right to expect drivers to use every precaution to avoid collision.

Pedestrian Responsibilities

Because of his vulnerability in a vehicle-pedestrian collision, the pedestrian has been granted certain protections of the law. Yet, the pedestrian has certain legal and moral responsibilities for his own safety. He is expected to cross city streets at crosswalks if a hazard is created by his doing otherwise. At signal-controlled intersections he is required to obey the "walk" and "don't walk" signals. The law does not allow the pedestrian to leave the curb suddenly and walk into the path of a car that is close enough to be a hazard.

Where there are no sidewalks, pedestrians are expected to walk on the side of the road or street facing oncoming traffic. When walking at night in unlighted areas where there is also vehicle traffic, the pedestrian should take measures to make his presence as visible as possible.

Driver Rights With Respect to Pedestrians

For all practical purposes, the motor vehicle operator has few rights over the pedestrian where the possibility of a vehicle-pedestrian collision exists. There are traffic laws regulating the behavior of the pedestrian in traffic but the enforcement of pedestrian laws has a low priority in most jurisdictions and these laws are, therefore, seldom enforced.

Drivers have a responsibility to take proper precautions to avoid collision with pedestrians at all times and places, even if the pedestrian jaywalks. Under no circumstances is the driver of a motor vehicle privileged to exercise the right-of-way over a pedestrian.

Defensive Practices for Pedestrians

The following practices should be observed by all pedestrians to defend against the vehicle-pedestrian collision:

1. Always cross the street in marked crosswalks or at intersections in line with sidewalks.
2. Walk only with the signal light or at the direction of a police officer.
3. Before leaving the curb, look first to the left and then to the right to be sure the way is clear; stop and look both ways and watch for turning cars.
4. Walk fast, but don't run, and be alert for cars which may suddenly turn into the street. Be especially careful of your footing if the pavement is slippery or uneven.
5. Walk directly across; do not loiter in the street.
6. If you carry an umbrella, do so in such a way as to have a clear view.
7. Get into or out of a car on the curb side if possible. If you use the door on the street side, wait for an interval in traffic before opening the door.
8. Wait for buses on the curb or in the safety zone. When you must walk through traffic to get to the safety island, move cautiously.

9. When descending from a bus in mid-street, walk in the safety zone to the crosswalk and then directly to the curb. If crossing to the opposite side of the street, wait until the bus has moved on. Never dash behind or in front of it and risk being caught in the flow of traffic.
10. At night, cross where the lights are bright and visibility is good.
11. Always stand on the curb, not in the street, while waiting to cross.
12. When walking along a road where there is no sidewalk, walk on the left side facing oncoming traffic.
13. At night wear or carry something reflective or carry a light, so that motorists' attention will be attracted to you.
14. Never use streets or roadways for play, or run suddenly into the street after balls, pets, etc.
15. Make use of subways or elevated crossings, safety islands and other provided safeguards.
16. Be just as alert and careful when walking in a group as when alone, and do not depend on others to watch out for your safety.
17. It is as dangerous to drink and walk in traffic as it is to drink and drive.

Young Persons

Pedestrians most frequently involved in accidents are young people up to 14 years of age. Approximately 30 per cent of the population of the United States is in this age category, yet this group accounts for 52 per cent of all pedestrian casualties (deaths and injuries). Young people usually have acute mental abilities but suffer from lack of fully developed physical coordination, experience, or sense of judgment, with the result that about 20 per cent of all pedestrians killed are in this age group. Some of the faulty pedestrian habits of children are playing in the streets, running from between parked cars, running across streets without looking, running across in groups or chasing someone and running into the street after pets or to pick up balls or other objects.

Many young children involved in accidents are injured on residential streets while playing during daylight hours. This would suggest that drivers require additional training to recognize such areas as having greater potential danger and requiring extra attention and caution.

The Over 65 Age Group

Persons over 65 years of age represent 9 per cent of the population yet they account for 27 per cent of the fatally injured pedestrians. The elderly person is more often involved in accidents at intersections and during hours of darkness. They tend to rely on the movement of other pedestrians and vehicles to tell them when to cross, rather than on traffic signals. Nearly all adult pedestrian fatalities are persons who have not been licensed to drive. Never having driven a car, the elderly person is unfamiliar with the limitations of both the vehicle and the driver. He is not aware of the car's minimum stopping distance at various speeds. The speed of an oncoming vehicle (closure rate) is difficult to judge, even for a pedestrian with perfect eyesight and excellent depth perception. Many elderly people tend to be inattentive or overconfident regarding what drivers can and will do to avoid hitting them. They are not able to react fast enough to danger and make little effort to compensate for this inability.

The Drinking Pedestrian

There is evidence that drinking and walking is an even greater problem than drinking and driving. A larger proportion of drinking pedestrians are involved in fatal accidents than drinking drivers. Recent studies of fatally injured pedestrians in several states have indicated that up to 69 per cent of the victims aged 15-64 showed blood alcohol concentration levels of 0.15 or more. It has been generally presumed that blood alcohol concentration levels of 0.10 per cent or more constitutes a condition of "under the influence of alcohol." Persons in this condition should not be walking in traffic. With dulled judgment and, at the same time, increased self-confidence, persons under the influence of alcohol lose both mental awareness and physical coordination.

Drunk pedestrian fatalities are 8½ times more frequent during hours of darkness than during daytime hours. Obviously, it is as dangerous to drink and walk in traffic as it is to drink and drive.

Pedestrian Invisibility in Darkness

More than 55 per cent of all motor vehicle accidents occur during the hours of darkness in spite of reduced pedestrian and motor vehicle traffic during these hours. Pedestrian deaths are most numerous in the early hours of darkness, especially in the fall and winter months.

A recent study by a group of Indiana researchers reports that while the average distance from which pedestrians thought they could be seen was 343 feet, the true distance was 173 feet. Statements made by the investigating officer and the driver revealed that 87 per cent of the drivers who hit a pedestrian at night claimed difficulty in seeing the pedestrian, and 23.4 per cent of the nighttime drivers claimed that they didn't see the pedestrian until after impact.

Pedestrians are the only moving objects permitted on the roadways without displaying a light or using other means to make themselves relatively conspicuous to vehicle drivers.

The solutions to the pedestrian visibility problem lie in better-lighted streets and highways, motorists driving within the stopping range of their headlights, and pedestrians wearing light-colored clothing or reflectorized materials or carrying a light.

SAFE WINTER DRIVING

WINTER DRIVING... It's come a long way

Winter driving sure isn't what it used to be. Time was when cold weather and the first snowfall spelled big trouble for car owners. Just getting the engine started on a cold winter morning was one thing, but getting anywhere was another. Automobiles and roads just weren't built for safe winter driving.

Winter driving today is still a tricky and dangerous business despite better cars, better roads, better all-weather maintenance. Trouble is, many motorists, lulled by the ease of modern motoring, fail to adjust their driving to meet winter's changing and hazardous conditions of roadway and visibility. The result can be disaster.

You can reduce your chances of having an accident with a little modern "know how"—a mixture of plain common sense and a few special driving skills recommended by the Committee on Winter Driving Hazards of the National Safety Council. Safe winter driving has come a long way from the "not-so-good old days."

GET YOUR CAR READY FOR WINTER

Battery

Don't take it for granted that your battery will see you through another winter. Battery power goes way down in cold weather. Get a charge if you need it—or maybe it's time for a new one.

Brakes

Faultless brakes are a "must" for winter safety. Have the equalization checked. A pull to one side can cause a dangerous skid.

Tires

Put your snow tires on *before* the snows fall. Studded tires are even better, preferably on all four wheels, especially on ice. For severe conditions, use tire chains.

(A tip on studded tires: When you remove them for summer storage, mark the position and direction each tire was rotating so the tire can be put on the same wheel next winter. Tire studs wear at an angle, depending on the direction of wheel rotation, and if the angle of direction is reversed the studs will rotate in an attempt to correct the angle. The studs loosen and could fall out.)

Windshield

Wipers should have adequate arm tension; worn blades should be replaced. Use an anti-freeze solvent in the washer system. Make sure defrosters will do the job.

Muffler

Carbon monoxide kills. A faulty exhaust system could mean disaster. Have the entire system checked for leaks.

MAKE SURE YOU CAN SEE

Keep windows clear—front, rear and both sides. Remember, danger can come from any direction. Brush snow off all around before you start out—don't be a peephole driver. Don't forget to clear the air intake in front of the windshield and free wiper blades if they are frozen.

Road spatter from slush and salted wet roads can greatly reduce visibility. Use windshield washers often, and if you're driving at night, stop occasionally to clean headlights and taillights. Headlight efficiency can be cut in half by grime.

It's best not to drive at all in fog, sleet or heavy snow. But if you must, keep your headlights on. And use the low beam—high beams give less illumination, more glare.

Tip: If the interior of the car is cold, turn on the defroster for a few minutes after the engine is warmed up to avoid freezing or smearing of windshield washer fluid.

On the Road in Winter . . . ANTICIPATE STOPS

You can't stop on a dime when you're driving on ice or snow. If you try it, you certainly won't be facing the right direction. Slow down gradually, well ahead of intersections where the going may be slippery. Keep in mind that traffic—starting and stopping at crossings—has a polishing effect on ice and packed snow.

Give yourself plenty of time and space to stop. Never jam on the brakes—you'll only go into a skid. Pump the brake with hard rapid jabs. That way your wheels will keep rolling and you won't lose steering control.

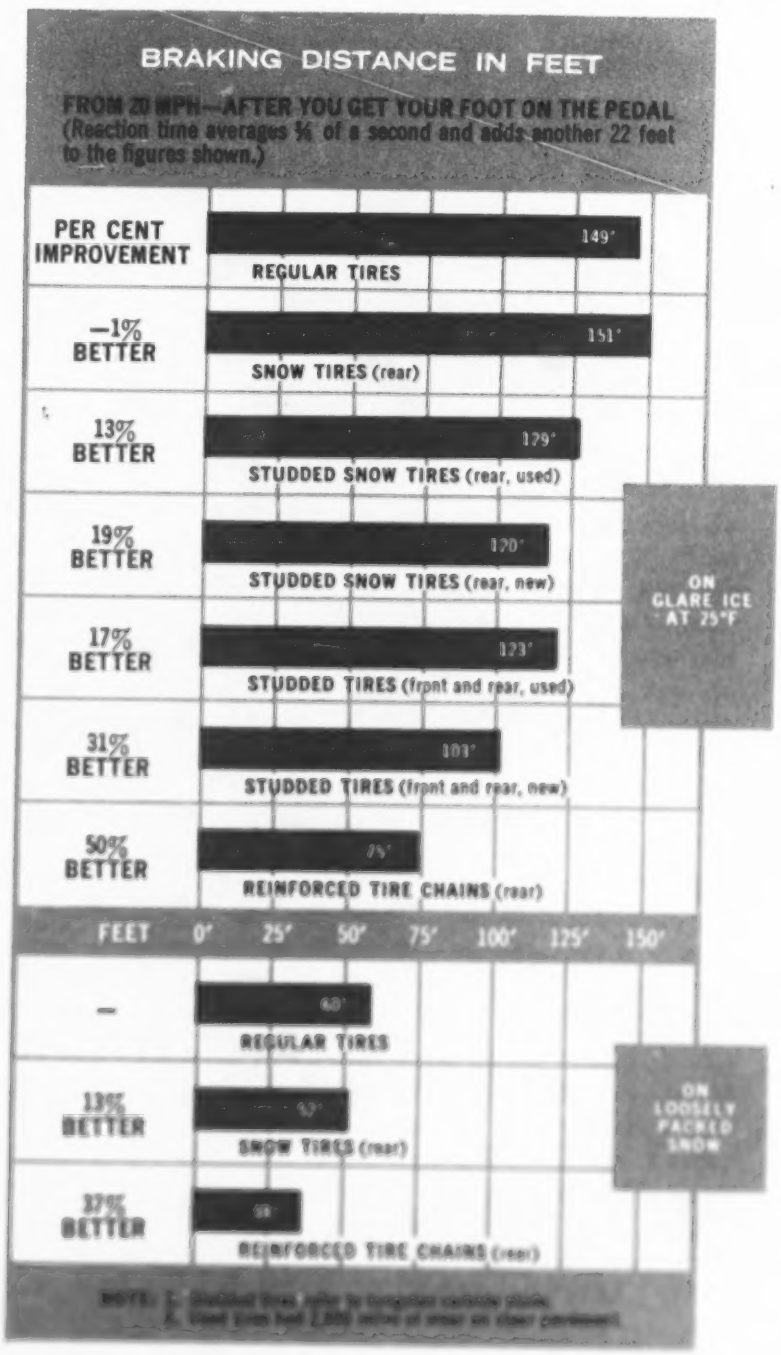
On the Road in Winter . . . STEER STEADY

Speed is out with winter driving if you want to keep steering control. Sudden lane changes or sharp turns can put you into a spin. Studded tires on all four wheels give a decided advantage in cornering.

If you do go into a skid, take your foot off the gas and turn your wheels in the same direction the rear of your car is skidding. You'll be able to feel the car come out of the skid—then straighten your wheels. Never hit the brakes when the rear end starts to slide.

Tailgating is always hazardous, but more so when the roads are slick. Increase your following distance. You'll need the extra room to make a safe stop.

Take a look at these braking distances:



Ice is twice as slippery at 30° as it is at 0°. Watch the temperature. And watch out for ice patches in shady areas and on bridge floors. If you hit one, hold the wheel steady and drive through. Slow down, but don't jam on the brakes.

TRIP TIPS

MAKE A TRIP PLAN

Itinerary

Write state capitals for official touring information; contact an oil company touring service; request a complete trip plan from your auto club.

From these sources work out your route to cover all the places you want to visit. But allow for flexibility—time for unplanned side trips that are likely to be the most memorable parts of your journey.

How far to go in one day? That depends on the driver, whether you can be relieved at the wheel, the kind of roads, how often you stop. On older roads, 300 miles a day may be a safe maximum (that's six hours on the road at a 50 mph average). On turnpikes and interstate highways, considerably more daily mileage can be rolled up. But where traffic is heavy, roads are winding or sight distances are poor—or where scenery is an important part of the day's travel—hold the mileage down for greatest safety and enjoyment.

Budget

A couple should budget about $35 a day to cover meals, a night's double-room lodging, gas, oil and normal car maintenance, plus $5 to $8 a day for incidentals. Taking along a couple of teenage children could raise the tab to about $55 a day.

Camping out, on the other hand, can cut daily expenditures by about half, especially if you picnic frequently at roadside parks and take it easy on unnecessary expenses. Certain minimum costs are basic (2¢ to 2½¢ per mile for the car, etc.). It's up to you and your pocketbook. BUT BE SURE YOU DO ESTIMATE EXPENSES BEFORE YOU LEAVE. ENJOY THE TRIP WITHOUT MONEY WORRIES.

Check List

A week or so before you start, start making a list of things to take along. Add other items as they come to mind. Use the list as a checkoff when you pack and load the car—it's the only way to avoid forgetting something essential.

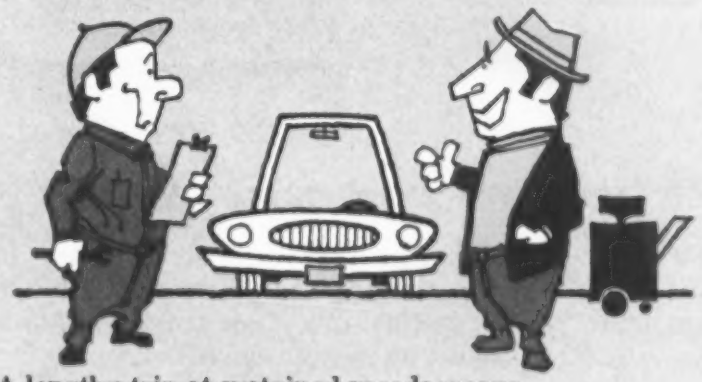
SAFETY CHECK YOUR CAR

Before you leave, get complete maintenance service—with emphasis on SAFETY.

A stall on today's high-speed roads can be a frightening—and dangerous—experience. So if you're not happy with your car's start, idle or road performance, tell your mechanic. A tune-up before setting out may save risk or towing expense later.

Tell your serviceman you're going to take a trip. Ask him to make a complete safety check covering:

Tires, including spare, Steering System, Brakes, Hoses and Belts, Exhaust System, Windshield Wipers and Washers, All Lights, Front End Alignment, Fluid Levels (water, oil, master brake cylinder, power steering reservoir, transmission, differential, battery).



A lengthy trip at sustained speeds means **SAFETY UP,** not just GAS UP

PACKING POINTERS

A heavy load changes the handling characteristics of your car, so don't expect the performance you are accustomed to in normal driving. Acceleration will be more sluggish. Stopping distances will be greater. And you'll find increased sway on curves. More room for passing and stopping will be needed.

Load the car so that you don't block rear corner vision or the rear-view mirror. A heavy trunk load can dangerously affect steering and headlight aim. This is especially hazardous in rain when the shift of weight balance from the front wheels can cause hydroplaning and loss of steering control. A top carrier or a small trailer may distribute a heavy load better.

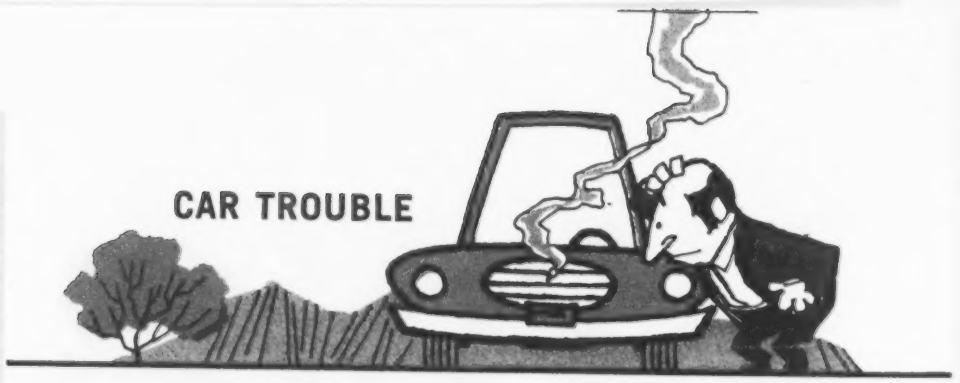
By all means, keep hard, pointed or heavy objects off the rear shelf. In a minor collision or even a sudden stop, they can become lethal missiles.

Proper tire inflation and adequate tire size are all-important considerations when carrying extra cargo. You may need additional air pressure—or larger-size tires may be necessary for safety. Consult your owner's manual or check with your car dealer.

EMERGENCY EQUIPMENT

Highway troubles are rare for the modern motorist, but they do happen. Here's what the wise driver keeps in his car for possible on-the-road emergencies:

Flares
FLARES
Portable electric light or lantern
FIRST AID
First aid kit and manual
Fire extinguisher—multi-purpose dry chemical is best
Tow strap or chain
Jack, lug wrench
If you have young passengers, car games to keep them occupied and quiet.



Your car can be stopped by:

1. **Empty fuel tank**
2. **Overheating**
3. **Electrical failure**
4. **Flooded carburetor**
5. **Wet ignition**
6. **Fuel system dirt**
7. **Vapor lock**
8. **Broken fan belt**
9. **Frozen gas line**

Most of these are problems you can handle. Here's how:

1. Check your gas gauge. If it reads "Empty" do not attempt to re-start engine until tank is refueled.
2. If engine overheats, stop in shade if possible. Put transmission in neutral or park. Lift hood. If fan belt is tight and hoses are not leaking, run engine at fast idle. If you have air conditioning, shut it off temporarily. If temperature does not return to normal after 15 minutes or so, drive slowly to the nearest service station, stopping for 15 minutes every couple of miles.
3. Electrical failure usually means a blown fuse or opened circuit breaker, a loose or broken wire or corroded battery terminals. If everything is dead, trouble is with the battery, battery cables or connections. Remove cables, clean battery terminals, and check tightness of cable connections to engine. If only headlights are out, circuit breaker has opened. It is heat actuated and will open and close, giving intermittent light that will help you get off the road, until trouble is corrected.
4. Gas smell means flooded engine. Remove air filter, flip choke open, crank engine. Engine will dry out and start. (Don't drive with air cleaner off; it also acts as a flame arrester.)
5. Wet spark plugs and cables will short out, causing engine to miss or stall. Dry off top of ignition coil, all cables and spark plug porcelain with a rag.
6. If dirt plugs fuel system, remove air filter, hold palm over carburetor while someone operates starter. Powerful suction may remove obstruction. If not, call for service.
7. Vapor lock: Just park in the shade, raise the hood, and wait 5 or 10 minutes. To speed things up, put a wet rag on the fuel pump and the fuel line to the carburetor to cool the vaporized gasoline inside.
8. If a fan belt breaks, the engine will overheat and the generator and air conditioner will quit. Stop to let the engine cool off (about 15 minutes), then proceed slowly to the nearest service station, stopping from time to time to cool the engine.
9. Gas line freeze is caused by the accumulation and freezing of water, usually in low spots of the fuel line. If waiting doesn't bring a thaw, you'll have to get a tow to a warm garage. Antifreeze poured in the gas tank will help prevent future trouble. Keeping the gas tank full will help stop condensation of water.

HOW TO CHANGE A TIRE IN 10 MINUTES

A tire change places your car in danger. Here's how to do it quickly and get moving again:

1. When a tire goes, steer firmly and guide car well off the road to solid ground. DON'T SLAM ON THE BRAKES.
2. Set the parking brake *tight*. Chock the wheel diagonally opposite the flat. Get out jack, lug wrench and spare.
3. Pry with chisel end of lug wrench to remove wheel cover. Slightly loosen each lug nut (may be left or righthand thread).
4. Place jack on firm ground, making sure it is perfectly vertical. See your car's directions for hooking the jack on the bumper inside the bumper guard or in notch provided on bottom bumper edge of some cars. Raise lever to "up" position, insert handle (usually the lug wrench) and pump jack until wheel is off ground 2 to 3 inches.
5. Remove lug nuts, place them in dish of wheel cover for safekeeping.
6. Lift wheel off, replace it with spare, screw lug nuts on until snug.
7. Flip lever to "down" position, pump car down until tire just touches ground. Then tighten nuts hard and finish jacking car down.

WARNING:

A bumper jack is only for tire changing. Never crawl under a car when it is on a bumper jack.

IF YOUR CAR WON'T START
and you know you're not out of gas

Do These Things

- Check to make sure your gear selector is in "N" (neutral) or "P" (park). Jiggle the lever from one position to the other. Often a balky in-gear safety switch can be freed this way.
- Turn off the radio, lights and everything electrical. This relieves the battery of excessive load.
- Wait a full minute. This rests the battery.
- Depress accelerator halfway. This brings the automatic choke into operation.
- Turn the starter key and hold it until the engine starts, or for 5 to 10 seconds. If the engine still won't start, it may be flooded. An odor of gasoline may be present.
- Wait two or three minutes. Then press the accelerator all the way to the floor and *hold* it there. Crank the engine again. Never pump the accelerator—this will only cause worse flooding. When the engine starts to "catch," the cylinders may not all fire evenly at first. Don't pump—keep your foot steadily on the gas pedal until the engine smooths out. Then let up on the accelerator but idle at least 30 seconds before shifting into gear and starting off.

PEOPLE EMERGENCIES
and how to handle them

You Need a Doctor

Observe speed limits but hurry to the nearest town. Flash your headlights at any patrol car you see along the way, then pull over and park. Officer will escort you. Without such help look for a policeman as you drive into town, or stop at the first drugstore and ask directions to the nearest hospital, clinic or doctor.
At the hospital, look for the EMERGENCY sign and drive directly to that entrance.

You Are Too Sleepy to Go On

1. Stop at the first safe place. Open two or more windows slightly, lock all doors.
2. Rest. Sleep, if possible for 30 minutes or more, then drink coffee if available.
3. When you resume driving, keep some windows open, play the radio, chew gum, sing, keep your eyes moving.
4. Stop for a night's rest at the first opportunity.

Caution: If fatigue is unusual for you, suspect an engine exhaust leak. Have the exhaust system checked before continuing your trip.

IF YOU HAVE AN ACCIDENT . . .

It happens to about 25 million persons every year. Here's what to do if it happens to you:

STOP AT ONCE near scene but away from traffic.

HELP THE INJURED but don't move anyone unless necessary. Give first aid only if you are qualified.

PROTECT THE SCENE by clearing the road if possible, putting out warning signals and stationing someone to warn traffic.

NOTIFY POLICE OR SHERIFF if there are injuries or property damage.

THEN–

- Get name and address of other driver and owner and license number of other vehicle.
- Get names and seating positions of other occupants.
- Write down names and addresses of witnesses.
- Make a diagram of the physical details of the accident. If possible, take pictures.
- See a doctor–you might be injured and not know it.
- Report to your insurance company immediately.
- File an official accident report with the state.

Do You Know That—

1. Even before the arrival of police, it's permissible to move cars if they are a traffic hazard.
2. You are required to tell only your name and address and show your driver license and vehicle registration. The law recognizes that you may be in a condition of shock and not competent to make a statement.
3. You don't have to sign anything for anybody.

TEN TIPS FROM THE "PRO" DRIVERS

Truck and bus drivers are among the most skillful on the road–many of them have driven more than a million miles without an accident. Here are some of their ideas for driving safely:

1. Adjust the seat so you're 4 to 8 inches from the lower rim of the steering wheel but able to press the pedals firmly. Sit up straight.

IF YOU ARE FIRST AT THE SCENE OF AN ACCIDENT . . .

Here's what to do:

Park off the highway 50 to 100 feet from the nearest car.

First help the injured and account for occupants of all vehicles. Call for medical aid if needed. Administer first aid only if qualified. Do not move injured unless they are endangered by traffic, fire or bleeding.

Protect the scene with flares, lantern or flags and get others to warn traffic in both directions.

Call any police authority–your call will be referred to the proper jurisdiction.

2. Fasten your lap belt snugly and don't forget your shoulder belt. In addition to its safety factor, a snug belt will help keep you sitting erect, with less back fatigue on long runs.
3. See that rear-view mirrors are correctly set for you.
4. Use your eyes–keep them moving ahead, to the mirrors, to the sides–and they'll give you advance warning of distant situations that quickly can become immediate emergencies.
5. Always leave yourself an "out"–space for possible evasive action–in adjoining lanes, front, rear or shoulder.
6. Watch the car in front and also the brake lights of the car ahead of it for extra time in stopping.
7. Learn to anticipate potential accidents. An expert driver "expects" the car following the bus to suddenly swerve around it into his lane.
8. Use your horn whenever you're not sure the other fellow sees you. The idea that a good driver doesn't have to use the horn is a dangerous fallacy.
9. At night, reduce speed about 10 mph below your usual daytime speed.
10. Realize, as pro drivers do, that you have passed the peak of your efficiency after five or six hours at the wheel. Allow for it, as the pros do, by slowing down and taking it easy.

YOU AND TOTAL HIGHWAY SAFETY

Traffic accidents and their toll in needless death, personal injury and property damage affect all of us and constitute one of the leading social problems of our society. There is no simple solution. The problem must be attacked in a balanced program that mobilizes all of the constructive resources of our national community.

While the control of traffic is the responsibility of official agencies, the individual also has a vital role.

On the highway, your immediate safety and that of your passengers is largely in your own hands. Many of the safety problems that arise in the course of a routine trip can be dealt with directly and effectively by driving defensively.

But there are numerous other safety factors not under your control—road conditions, speed limits, etc.—that can affect your trip for better or worse. These factors are the responsibility of official agencies. How well the agencies deal with them depends on the degree of citizen understanding and support for safety within a given constituency.

It is a political fact of life that government agencies will not extend their role in traffic safety beyond that which the public finds acceptable.

As an individual, you contribute to the quality of this political climate by your everyday acts as a citizen, taxpayer, voter and consumer and/or as a member of an active citizen support group.

Maximum control of traffic accidents and their effects in any given geographical area depends upon a partnership between the citizens and their official agencies in a comprehensive traffic safety program involving these three phases of traffic safety:

Prevention – Measures taken by the individual and official programs to prevent traffic accidents from occurring in the first place.

Mitigation – Measures taken by the individual and official programs to protect against or reduce the severity of personal injuries should an accident occur in spite of preventive efforts.

Rehabilitation – Measures taken by the individual and official programs to insure prompt adequate medical aid to the injured, remove accident debris and restore the roadway to safe operating condition.

What the individual and official programs can do in each of these three phases of accident control is shown in the table at the right.

THREE POINTS OF ATTACK ON TRAFFIC ACCIDENTS

PREVENTION

What You Can Do

Take the Defensive Driving Course

Apply Defensive Driving Principles on the Highway

Limit Your Driving When Below Par Physically, Upset, Tired, etc.

Maintain Vehicle in Good Condition

Support Official Programs

(Experience in professional fleets has demonstrated that group accident rates can be cut in half by the conscious practice of Defensive Driving by all drivers in the group.)

Can you think of other things you could do to prevent accidents?

What Official Programs Are Doing

Uniform Traffic Laws and Ordinances

Driver Licensing

Traffic Courts

Traffic Law Enforcement

Driver Education

Periodic Motor Vehicle Inspection

Highway Design, Construction and Maintenance

Traffic Accident Records

Can you think of other things official programs could do to prevent accidents?

MITIGATION

What You Can Do

Equip Your Vehicle with Known Safety Devices

Use Safety Belts at All Times

Keep Doors Locked

Make Sure Passengers Use Safety Belts (It is estimated that 3,000 lives were saved in 1968 because the persons involved in the crash were wearing safety belts at the time. Had all those involved in crashes been wearing safety belts, it is estimated that a total of 10,000 lives would have been saved.)

Can you think of other things you could do to minimize injuries in a motor vehicle accident?

What Official Programs Are Doing

Federal Safety Standards for Motor Vehicle Manufacture

(Experts estimate that the energy-absorbing steering column may ultimately reduce driver deaths by 70 per cent when all cars are equipped with them.)

Removal of Roadside Hazards

Can you think of other things official programs could do to minimize injuries in a motor vehicle accident?

REHABILITATION

What You Can Do

Know First Aid Procedures

Keep First Aid Kit in Car

Have Emergency Equipment in Car Such as Flares, Portable Electric Lights, etc.

Support Official Programs

Can you think of other things you could do to provide faster, better medical aid to the injured?

What Official Programs Are Doing

Emergency Communications

Emergency Medical Services

(Physicians estimate that from 10,000 to 20,000 persons injured annually in traffic accidents die needlessly for lack of prompt, adequate medical care.)

Identification and Surveillance of Accident Locations

Debris Removal

Can you think of other things official programs could do to insure faster medical service to those injured in traffic accidents?

Why
The Car You Buy Today
Is A Safer Car

Scientific research and new technology have laid the basis for higher standards of safety in the design and construction of the new car you buy today.

Under the National Traffic and Motor Vehicle Safety Act of 1966, Federal safety performance standards have been established for all cars manufactured since December 31, 1967, for sale in the United States.

The safety performance standards are being progressively refined and ever higher levels of safety in car design and construction are likely to be specified in the years ahead.

If your car was manufactured after December 31, 1968, for sale in the United States, it must embody the safety features shown in the diagram below (some of which are found on earlier car models).

Although your new car is becoming progressively safer, it is up to you to use at all times the safety features provided and, through systematic care and maintenance, keep these safety features from deteriorating.

1. Labeled controls within reach of safety-belted driver
2. Shift sequence for automatic transmissions
3. Windshield defrosting and defogging systems
4. Windshield washers and two-speed wipers
5. Residual braking system and reliable brake hoses
6. Improved parking brake
7. Tires and rims adequate for maximum capacity
8. Elimination of wheel cover protrusions
9. Interior impact protection
10. Energy-absorbing steering assemblies
11. Improved laminated windshields
12. Improved door latches and hinges
13. Lap safety belts in all passenger positions
14. Shoulder safety belts for two outboard front seat positions
15. Rear-view mirror outside
16. Safer fuel tanks and fittings
17. Reduction in glare quality for bright metal surfaces
18. Head restraints
19. Improved hood latch systems
20. Improved lighting standards and fail-safe headlight concealment devices (if used)
21. Visible identification numbers

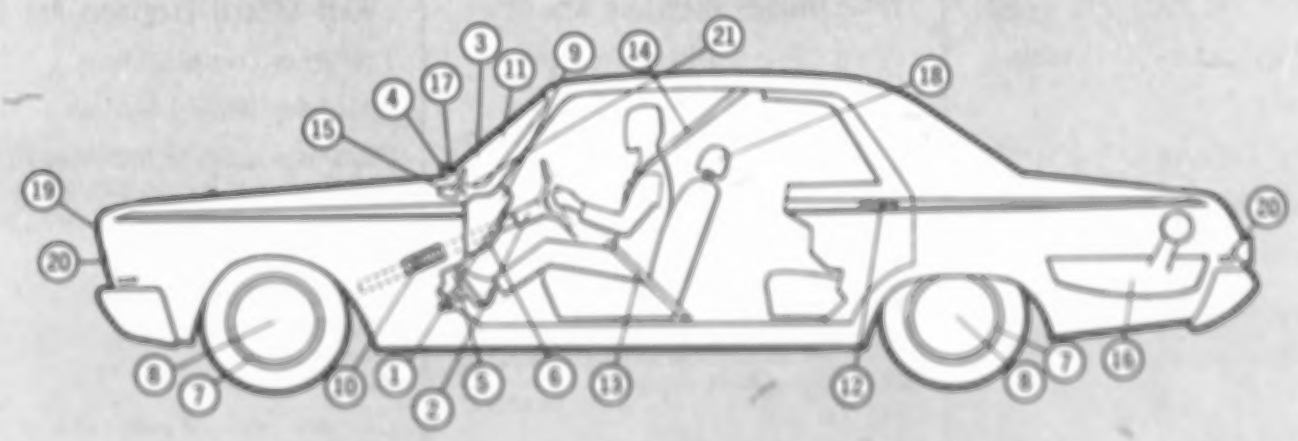


Chart courtesy of U.S. Department of Transportation, Federal Highway Administration, National Highway Safety Bureau

DRIVER IMPROVEMENT PROGRAM

GLOSSARY *

ACCELERATION LANE—A speed-change lane for the purpose of enabling a vehicle to increase its speed to a rate at which it can more safely merge with through traffic.

ACCIDENT—An event, occurrence, or happening which is unexpected or undesigned, which has an element of chance or probability, and which usually produces unintended injury, death, or property damage.

ACCIDENT PREVENTION FORMULA—A three-step, time-honored method of avoiding accidents. It consists of: 1) recognizing the hazard, 2) understanding the defense, and 3) acting in time.

ACCIDENT REPORT—The description and details of an accident, usually reported on a standard form, for the purposes of determining guilt and/or preventability.

AUTOMOBILE MANUFACTURERS ASSOCIATION (AMA)—The organization through which motor vehicle manufacturers in the United States voluntarily cooperate in carrying out programs that promote the efficient, safe and economical manufacture and use of motor vehicles. Address: 320 New Center Bldg., Detroit, Michigan 48202

BICYCLE—Every device, propelled by human power upon which any person may ride, having two tandem wheels either of which is more than 20 inches in diameter.

BLOOD-ALCOHOL LEVEL—The percentage of alcohol in a person's bloodstream, used by enforcement agencies to determine the degree of a driver's intoxication. In most states, a BAL of .15% is prima facie evidence of intoxication. If your total blood supply were equal to $100.00, this would be 15c worth of alcohol.

BRAKE DETONATOR DEVICE—An instrument used to demonstrate and measure reaction, braking and stopping distances.

BRAKE FADE—A temporary reduction of brake effectiveness resulting from heat.

BRAKING DISTANCE—The total distance traversed by a vehicle while it is being brought to rest, measured from the position of the vehicle at the instant the brake shoe touches the brake drum.

BRAKING TIME—The time elapsed between the instant of first retardation by the brakes and the instant at which the vehicle comes to rest.

BYPASS—A highway intended to divert through traffic from a particular area by going around or passing by the area.

CAR LENGTH—The measurement in feet of an average automobile. Usually used in the abstract sense to measure the distance between two vehicles, especially when determining following distance. When used in this sense, a car length should never be figured at less than twenty feet.

CAUSE *(of accident)*—A combination of simultaneous and sequential circumstances without any one of which the accident could not have happened.

CENTRIFUGAL FORCE—The component of apparent force on a body in curvilinear motion that is directed away from the center of curvature. This is responsible for the "pull" of an automobile going around a curve or corner.

CONTRIBUTORY NEGLIGENCE LAW—A statute providing that a driver may not recover damages resulting from another's negligence in a motor vehicle accident if he also contributed to the accident by his own negligence.

CRITICAL APPROACH SPEED—At an intersection, that speed above which a vehicle does not have sufficient distance to stop in time to avoid collision with another vehicle approaching the intersection on the cross street.

CURB—A vertical or sloping member along the edge of a pavement or shoulder forming part of a gutter, strengthening or protecting the edge, and clearly defining the edge to vehicle operators.

DAYTIME—Including twilight, from a half hour before sunrise to a half hour after sunset.

DECELERATION LANE—A speed-change lane for the purpose of enabling a vehicle that is to make an exit turn from a roadway to slow to the safe speed on the curve ahead after it has left the main stream of faster-moving traffic.

DEFENSIVE DRIVING—Driving to prevent accidents in spite of the incorrect actions of others and adverse conditions.

DISCOURTESY—One of the errors which makes driving unpleasant and more hazardous, and which defensive drivers must avoid.

DRIVER IMPROVEMENT PROGRAM—A National Safety Council program the mission of which is to save lives and prevent injuries and property damage due to traffic accidents, chiefly by administering the Defensive Driving Course.

DRIVER-JUDGMENT DISTANCE—The distance a vehicle travels during driver-judgment time.

DRIVER-JUDGMENT TIME—Time required by a driver to appraise a situation, judging speed and traffic conditions, immediately after perceiving the situation and immediately before reacting to it.

DRIVING WHILE INTOXICATED—Operating or being in physical control of any vehicle while faculties or judgments are impaired to any degree by ingested alcohol of any kind.

ELEMENTS OF DEFENSIVE DRIVING—Five elements which a defensive driver must possess and use at all times. They are: Knowledge, Alertness, Foresight, Judgment and Skill.

EVASIVE ACTION—The reaction of a traffic unit to a dangerous situation that has been perceived.

FATAL ACCIDENT—An accident which results in the death of one or more persons within twelve months of the date of the accident.

FINANCIAL RESPONSIBILITY—A driver's or car owner's ability to pay up to a legally limited amount for damage caused by negligence in driving. It may be in the form of property, a bond, or liability insurance.

FIXED OBJECT—A classification of traffic accident which accounts for approximately five percent of all deaths each year. Fixed object accidents involve the driver and light standards, bridge abutments and other objects immediately adjacent to the roadway.

FLASHING RED—When a red lens is illuminated by rapid intermittent flashes, drivers of vehicles shall stop before entering the nearest cross walk at an intersection or at a stop line when marked, and the right to proceed shall be subject to the rules applicable after making a stop at a stop sign.

FLASHING YELLOW—A traffic signal indication for which a yellow lens is illuminated with rapid intermittent flashes to signify that drivers of vehicles may proceed through the intersection or past such signal only with caution.

FOLLOWING DISTANCE—The distance from the front of a vehicle to the rear of the one ahead in the same traffic lane. Also: headway.

FOUR-STEP PRESCRIPTION—Four rules used by defensive drivers to guard against the head-on crash. They are: 1) Read the road ahead, 2) Ride to the right, 3) Reduce speed, and 4) Ride right off the road.

FRONTAGE ROAD—A roadway contiguous to and generally paralleling an expressway, freeway, etc. so designed as to intercept traffic desiring to cross, enter or leave such facility and to furnish access to property which otherwise would be isolated as a result of the controlled-access feature.

GRADE SEPARATION—A crossing at different levels of two highways or a highway and a railroad.

GRADIENT—The rate of rise or fall with respect to the horizontal along the length of a road, or, a length of road which is not level.

GUARDRAIL—A highway safety device consisting of posts and rail members, or of wall sections erected at the side of the roadway to mark points of major hazard and to restrain out-of-control vehicles.

HEADWAY—The time interval between passages of consecutive vehicles, measured from head to head, moving in the same direction as they pass a given point.

HIGHWAY—The entire area included within the right-of-way of a public way for purposes of vehicular travel in rural areas or in urban areas where there is comparatively little access and egress and generally a way between prominent termini.

HYDROPLANING—A phenomenon whereby automobile tires lose contact with the road and the automobile "water skis" along on a thin layer of water between the tires and the road. This occurs when the right combination of speed, road surface, water, vehicle weight and tire tread is present.

IMPLIED CONSENT—Under this law, prevailing in most states, a driver, just by the fact of his possessing a driver's license, consents to a chemical test if arrested for an offense involving drinking and driving.

INNER LANE—The left lane in one direction on a road with two or more lanes in that direction.

INTERCHANGE—A system in conjunction with a grade separation of interconnecting roadways providing for the interchange of traffic between two or more roadways or highways on different levels.

INTERSECTION—The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways of two highways which join one another at, or approximately at, right angles, or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict.

INTERSTATE SYSTEM—A national network of 41,000 miles of the most important highways which, according to Congressional direction, shall be "so located as to connect by routes, as direct as practicable, the principal metropolitan centers to serve the national defense, and to connect at suitable border points with routes of continental importance in the Dominion of Canada and the Republic of Mexico."

JUNCTION—The general area where two or more highways join or cross, within which are included the roadway and roadside facilities for traffic movements in the area.

LOCAL TRAFFIC—That part of the traffic originating within a given area having both origin and destination within the area.

MEDIAN—The portion of a divided highway separating the traveled ways for traffic in opposite directions.

MERGING—The process by which drivers in two separate traffic streams moving in the same general direction combine or unite to form a single stream.

MOTORCYCLE—Every motor vehicle having a seat or saddle for use of the rider and designed to travel on not more than three wheels in contact with the ground, but excluding a tractor.

MOTOR SCOOTER—A motor-driven vehicle with two wheels less than eighteen inches in diameter.

MOTOR VEHICLE—Every vehicle which is self-propelled or is propelled by electric power obtained from overhead trolley wires but not operated on rails.

MOVING VIOLATION—A violation of any law, ordinance or regulation affecting the use or protection of streets or highways enacted primarily to regulate safe movement of vehicles and pedestrians.

MYSTERY CRASH—The run-off-the-road accident which accounts for approximately thirty percent of all traffic deaths. It is so called since the only witness is often killed in the accident and the exact cause is difficult to determine.

NATIONAL HIGHWAY SAFETY ACT—This Act, passed by Congress in 1966, provides standards for state safety programs developed jointly by federal and state officials and agencies.

NATIONAL SAFETY COUNCIL—A federally chartered, non-governmental, not-for-profit organization of industries, agencies, associations, and individuals organized to promote industrial, traffic, transportation, home, farm, and other safety directly and in cooperation with local chapters and other safety organizations. Address: 425 N. Michigan Ave., Chicago, Illinois 60611.

NIGHTTIME—Any time other than daytime.

NON-PREVENTABLE—An accident which occurred in spite of the fact that the driver(s) did everything reasonable to prevent it.

OPERATOR—Every person, other than a chauffeur, who drives or is in actual physical control of a motor vehicle upon a highway or who is exercising control over or steering a vehicle being towed by a motor vehicle.

OUTER LANE—The right lane in one direction on a road with two or more lanes in that direction.

PARKING—The standing or halting of a vehicle, whether occupied or not, otherwise than temporarily for the purpose of and while actually engaged in loading or unloading merchandise or passengers.

PASSENGER CAR—A freewheeled self-propelled vehicle designed for transportation of persons but limited in seating capacity to not more than seven passengers. It includes taxicabs, limousines, and station wagons, but does not include motorcycles.

PASSIVE RESTRAINTS—Devices used to enhance the occupant's chances of surviving a crash by preventing his ejection and minimizing the effects of the second collision (hitting steering wheel, etc.). The passive system, unlike the active (safety belts, etc.) requires no conscious effort on the part of the occupant. Passive devices range from air bags and cushions to padded dashboards and energy absorbing steering assemblies.

PEDESTRIAN—Any person afoot.

PERFECT DRIVING—Safely completing each trip by avoiding the errors of accidents, traffic violations, vehicle abuse, schedule delays, and discourtesy.

PORTRAIT OF A PERFECT PASS—Executing a perfect pass by following these twelve steps: 1) Ask yourself "is it necessary?" 2) Stay back, 3) Check ahead, 4) Check behind, 5) Signal left, 6) Move left, 7) Accelerate, 8) Tap horn, 9) Signal right, 10) Move right, 11) Cancel directional signal, 12) Resume speed.

PRE-TRIP MENTAL INVENTORY—The defensive driving practice of taking a few moments before each trip to determine what adverse conditions of light, weather, traffic, road, vehicle and driver are present, and how they can be met.

PREVENTABLE—A preventable accident is one in which you failed to do everything you reasonably could have done to prevent it.

RAMP—A turning roadway at an interchange for travel between intersection or junction legs.

REACTION DISTANCE—The distance traveled in reaction time, depending on speed.

REACTION TIME—The time that a person takes, after sensory perception of a situation, to realize the meaning of the situation, decide what to do about it, and start acting.

REVOCATION—The termination by formal action of the Department of Motor Vehicles of a person's driver's license or privilege to operate a motor vehicle on the public highways, which termination shall not be subject to renewal or restoration except that an application for a new license may be presented and acted upon by the department after the expiration of at least one year after the date of revocation.

ROADWAY—That portion of a highway which is improved, designed or ordinarily used for vehicular travel, exclusive of the berm or shoulder.

RIGHT-OF-WAY—The privilege of the immediate use of the roadway.

SAFETY ZONE—The area or space officially set apart within a roadway for the exclusive use of pedestrians and which is protected or is so marked or indicated by adequate signs as to be plainly visible at all times while set apart as a safety zone.

SCHEDULE DELAYS—One of five errors which a defensive driver must avoid in order to have a perfect trip.

SECOND LANE—On a multi-lane roadway, the traffic lane to the left of the right lane available for traffic traveling in the same direction.

SECURED—A vehicle which has been properly locked. This would include closing all windows and side vents and locking the ignition, steering wheel and all doors.

SHOULDER—That part of the graded width of a trafficway exclusive of the traveled way or pavement.

SIX ADVERSE CONDITIONS—These conditions, encountered singly or in groups, can trick a driver into an accident if they are not considered. They are: Light, Weather, Road, Traffic, Vehicle, and Driver.

SIX POSITIONS OF THE TWO-CAR CRASH—There are six, and only six, positions which one car takes in relation to another when they crash. A driver can be involved in a collision with: 1) The car ahead, 2) The car behind, 3) The car coming from the opposite direction (head-on), 4) The car at an intersection, 5) The car passing, and 6) The car being passed.

SPEED-CHANGE LANE—An auxiliary lane, including tapered areas for acceleration or deceleration of vehicles entering or leaving through traffic lanes.

STANDING—A vehicle stopped for a brief interval (as when loading or unloading).

STOP LINE—A line behind which vehicles should stop when directed by a traffic officer, traffic-control signal, stop signal, or stop sign.

STOPPING—When prohibited means any halting even momentarily of a vehicle, whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the directions of a police officer or traffic-control sign or signal.

STRATEGY OF TOTAL TRAFFIC SAFETY—A traffic safety concept that divides the accident sequence into three time zones: Pre-Crash, Crash, and Post-Crash. These zones are studied to gain a better understanding of what can be done to prevent or alleviate the effects of the accident.

TAILGATE—The hazardous practice of one car following another at less than the recommended distance of one car length per each ten m.p.h. of speed.

THIRD LANE—On a multi-lane roadway, the traffic lane third from the right in the direction of traffic flow available for moving traffic.

THROUGH TRAFFIC—That part of the traffic circulating within a given area, or at a given point in that area, having neither origin nor destination within the area.

TIDAL TRAFFIC—Traffic on a two-way road proceeding predominantly in one direction or the other according to time or other recurrent circumstances.

TOTAL REACTION DISTANCE—The distance traveled between the point at which the driver perceives that braking or evasive action is required and the point at which he contacts the braking controls.

TOTAL REACTION TIME—The time required for a traffic unit to move the total reaction distance.

TOTAL STOPPING DISTANCE—The distance in which a vehicle comes to rest after the driver discovers a hazard which requires stopping. This is the sum of reaction distance and braking distance.

TOTAL STOPPING TIME—The time required for a vehicle to move the total stopping distance.

TRAFFIC—Pedestrians, ridden or herded animals, automobiles, trucks, buses and other vehicles and conveyances, either singly or together while using any highway for purposes of travel.

TRAFFIC UNIT—Any person using a trafficway for travel, parking, or other purpose as a pedestrian or driver, including any vehicle, other device, or animal with which he is using it.

TRAFFIC VIOLATION—The breaking of any traffic law or ordinance. This is one of the errors a defensive driver must avoid to have a perfect trip.

TWO-CAR CRASH—An accident category that accounts for approximately 42% of all traffic deaths each year.

TWO-SECOND RULE—A defensive driving rule of thumb used to determine a safe following distance. If one car stays two seconds behind the car ahead, a safe distance will be insured.

UNIFORM VEHICLE CODE—A model law recommended by the National Committee on Uniform Traffic Laws and Ordinances for adoption by the states to secure uniformity in motor vehicle legislation.

VEHICLE—Every device in, upon, or by which any person or property is or may be transported or drawn upon a highway, excepting devices moved by human power or used exclusively upon stationary rails or tracks.

VEHICLE ABUSE—A costly error which must be avoided by the defensive driver to insure a perfect trip.

WEAVING—The crossing of traffic streams moving in the same general direction accomplished by merging and diverging.

WHEEL BASE—Distance from the center of the front wheel to the center of the rear wheel.

WORD MARKINGS—Word messages marked on the pavement to aid in the control of traffic.

*Special thanks to Northwestern University Traffic Institute for permission to quote from DICTIONARY OF HIGHWAY TRAFFIC.

STUDENT REGISTRATION CARD

Name_____ Date_____

Home Address_____ Phone No._____

City_____ State_____ Zip_____

Organization_____

Occupation_____

Driver's License Number_____

Licensed Drivers in Family_____ Make of Car_____ Year_____

Remarks: _____

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